J. H. KLEINFELDER & ASSOCIATES

HYDROGEOLOGIC ASSESSMENT
POND NUMBER 1
SOUTHERN CALIFORNIA CHEMICAL CO., INC.
SANTA FE SPRINGS, CALIFORNIA

10-24-85 4A

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GEOTECHNICAL & ENVIRONMENTAL CONSULTANTS • MATERIALS TESTING
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October 24, 1985

Southern California Chemical Co., Inc.
8851 Dice Road
Santa Fe Springs, California 90620

Attention: Ms. Tere King

Dear Ms. King:

Attached to this letter is our final report entitled "Hydrogeologic Assessment of Pond Number 1, Southern California Chemical Company, Santa Fe Springs, California". The report presents a summary of the field exploration, laboratory testing and analysis prepared during investigation.

We trust the information presented in the report meets your needs at this time. Should you have any questions regarding the report, please feel free to contact us at your convenience.

Very truly yours,

J. H. KLEINFELDER & ASSOCIATES

Kenneth L. Durand
Hydrogeologist

Randolph C. Harris
Senior Hydrogeologist

KLD/RCH:gw

Attachment

HYDROGEOLOGIC ASSESSMENT OF POND NUMBER 1
SOUTHERN CALIFORNIA CHEMICAL CO., INC.
SANTA FE SPRINGS, CALIFORNIA

1.0 INTRODUCTION

This report summarizes the work and findings of the hydrogeologic assessment of Southern California Chemical Company's pond number 1. The purpose of this investigation was to determine if there has been leakage of pond number 1.

A site plan illustrating the facility is presented on plate 1 with the study area and location of pond number 1 illustrated on plate 2.

2.0 SCOPE OF WORK

The following scope of work was developed to determine if contamination of the soil or groundwater exists in the area of pond number 1 and, if contamination does exist, to determine its source. To that end, this work plan was developed to provide a technically sound, reasonable, and cost-effective approach to assessing the site.

2.1 Soil Borings/Sampling

A total of 11 soil borings were drilled in the vicinity of pond 1. The location of these borings are presented on plate 2. Depth of the borings ranged between 15 and 107 feet. Individual boring depths are presented in Table A and on the boring logs.

Due to artesian groundwater conditions, the use of hollowstem equipment beneath 45 feet was impossible. With the concurrence of the Regional Water Quality Control Board (RWQLB), the borings were drilled by the hollowstem auger method for the upper 45 feet. If the boring was deeper than 45 feet, then mud rotary equipment was used for the remainder of the hole. The augers, drill rod and drill bits were steam cleaned prior to use and between borings to minimize the potential for cross contamination. The drilling was performed by Datum Exploration under the observations of a J.H. Kleinfelder staff geologist who visually logged the borings and classified the soils. The boring logs are presented on Plate Nos. 4 through 14. Plate No. 3 illustrates the Unified Soils Classification System used to classify the soils encountered.

Soil samples were collected during the drilling operation at approximately 5 foot intervals in the unsaturated zone and then at stratigraphically significant intervals once groundwater was encountered. A modified Porter Sampler was used to collect samples. Soil samples were collected for both laboratory analysis and for visual classification of soil types. All retained soil samples were collected in brass sampling tubes, sealed with aluminum lined caps, labeled, and delivered to Brown and Caldwell Laboratories, Pasadena, California for chemical analysis, with the appropriate chain of custody form. Copies of the chain of custody forms are included in the Appendix.

2.2 Monitoring Well Construction/Development

Five of the soil test borings were completed as monitoring wells. Monitoring wells 4, 8 and 10 were constructed with 2-inch diameter PVC pipe and 0.020 inch machine slotted screen. Wells 4A and 9 were constructed with 4 -inch diameter PVC pipe and 0.020 inch machine slotted screen. The screened section annulus was packed with clean sand and a bentonite plug was placed above the sand pack. The remaining annulus was cemented from the plug up to the surface. No solvents or glues were used during the well construction. The details of each individual well completion are shown on each respective boring log.

Each well was finished with either an aluminum well head box with a moisture and tamper resistant lid or a locking steel cased well protector. The well head boxes are set 1 to 2 inches above ground level, with a finished cement apron to minimize the potential for entrance of surface fluids. A 3-foot high well protector was used on MW-4A to prevent damage due to truck traffic.

After installation the wells were develoepd with an air lift developing tool equipped with a foot valve to prevent the introduction of air into the formation. The wells were pumped until the water was relatively clear.

2.3 Water Sampling

All wells were measured for static water level prior to sampling. The wells were then purged and sampled using an air activated submersible pump (bladder pump) constructed of stainless steel and silicon. To minimize the potential for cross-contamination, the

pump and teflon sampling line were thoroughly decontaminated before sampling and between wells by the following procedure:

1. Exterior surface of sampling tubes are decontaminated by steam cleaning during withdrawal from every well.
2. Sample pump is disassembled and the used bladder removed.
3. All pump components are then steam cleaned and rinsed in distilled water.
4. Pump is reassembled with a new bladder installed.
5. Teflon sampler lines are pressure washed with 5 to 10 gallons of clean, hot water through direct connection to steam cleaner.
6. Five gallons of distilled water are then pumped through entire systme.

Prior to sample collection, a minimum of five well volumes are purged from the well to permit collection of a representative groundwater sample from the aquifer penetrated.

2.4 Laboratory Testing/Quality Control

Laboratory testing for this project consisted of analyzing 59 soil samples and 6 water samples. Soils were analyzed for the substances that have historically been used in the pond. These are listed in Table B. Water samples from monitoring well number 4 were analyzed for: 1) the parameters that characterize the suitability of the groundwater as a drinking water supply as specified in 40 CFR part 265 Appendix III; 2) the parameters that establish the groundwater quality as specified in 40 CFR part 265.92 (b) (a); 3)

the parameters used as indicators of groundwater contamination as specified in 40 CFR part 265.92 (b)(3); and 4) the compounds requested by Department of Health Services (DOHS) and the RWQCB in their letter dated December 11, 1984. These parameters are listed in Table C. Monitoring wells 4A, 8, 9 and 10 were analyzed for: 1) the parameters used as indicators of groundwater contamination as specified in 40 CFR part 265.92 (b)(3); and 2) substances detected above drinking water standards in monitoring well 4 during previous work. The testing was performed at Brown and Caldwell, Pasadena, California. The results of the laboratory testing ware summarized and presented in Tables D through G of the Appendices. Individual test results are included in Appendixs A & B. All analysis was performed by procedures outlined in the 14th Edition of Standard Methods.

To monitor the precision and accuracy of the chemical data, the following quality assurance measures were employed:

1. Duplicate samples,
2. Split samples,
3. Trip blank testing,
4. Cross contamination testing.

Duplicate samples were taken at each sampling site. In the case of 40 ml VOA vials, four samples were obtained for each parameter as required in 40 CFR section 265.82 (b)(3). This ensures that if breakage or trouble with the testing equipment occurs, there is a backup sample to test. This also allows a recheck on results if there is an inconsistency or if confirmation of results is necessary.

Trip blank (distilled water) was included by the laboratory to monitor quality control during transportation and testing of the samples. Split samples were provided to both the RWCQB and Southern California Chemical Company. Comparison of the results for chromium in monitoring well 4, the major chemical of concern, demonstrate the relative consistency of the data. The Regional Board's laboratory consistencedetected 520 ppm of total chromium. Brown and Caldwell detected 500 ppm of total chromium. Southern California Chemical Company's in-house laboratory detected 520 ppm of total chromium in the groundwater. This consistency demonstrates a high level of confidence in the results.

In an effort to ensure the precision and accuracy of the data, quality control measures were employed to both minimize and measure cross-contamination potential.

To minimize cross-contamination between field samplings, the pump and sample lines are purged by the procedure detailed in Section 2.3. The total volume of pump and lines is less than one-half gallon. The pumping results in 20 to 26 volumes of clean water being flushed through the system.

All samples were labeled during sampling and shipped refrigerated to Brown and Caldwell Laboratories, Pasadena, California. A chain of custody form was maintained for all samples taken. Copies of these forms are included in Appendix C.

3.0 GEOLOGY/HYDROGEOLOGY

3.1 Geology

Southern California Chemical Company's Santa Fe Springs facility is located in Section 31 of Township 2 South, Range 11 west (San Bernardino Base meridian), within the Santa Fe Springs Plain area of the coastal plain of Los Angeles County, California. The Santa Fe Springs Plains is a low, slightly rolling topographic feature that has been warped by the Santa Fe Springs - Coyote Hills anticlinal system. These plains dip gently both to the northeast toward Whittier and to the southwest toward the Downey Plains, with an elevation difference that ranges between 175 and 200 feet above sea level.

The site is located on upper Pleistocene alluvium of the Lakewood Formation. The Lakewood formation unconformably overlies the lower Pleistocene San Pedro formation, the Pliocene Pico and Repetto formations, and the Miocene Puente formation. Beneath the site, only the Lakewood and the San Pedro formations contain fresh water bearing units (Plate 15).

3.2 Hydrogeology

The site area is located on surface exposure of the Bellflower Aquiclude, a low permeability portion of the Lakewood formation. This late Pleistocene alluvial formation is approximately 15 to 20 feet thick and consists of clays, silts, silty clays and sandy clays at this location. The Gage Aquifer underlies this and is approximately 15 to 20 feet thick, consisting of fine to medium sands area. Under the Southern California Chemical site the Gage Aquifer is dry. The literature (2) places the bottom of the Gage Aquifer at approximately 50 feet beneath the surface. On-site borings indicated

that the bottom of the Gage is actually at approximately 30 to 35 feet. All the borings drilled on site encountered a clay to silty clay layer beneath the Gage. This is most likely the top of the uppermost aquiclude of the San Pedro Formation. This aquiclude is approximately 15 to 20 feet thick and serves to separate the Gage Aquifer from the Jefferson Aquifer. The Jefferson Aquifer underlies this aquiclude and is the uppermost aquifer beneath the site. All water samples were obtained from this aquifer. The transmissivity of this aquifer is on the order of 40,000 gallons per day per foot (2) beneath the site. Based on an assumed aquifer thickness of 50 feet and an error factor of 1 x 10', a permeability range of 8000 to 80 gal/day/ft^2 can be expected.

The general regional flow of groundwater in the area is to the south to southwest (3, 9). The water levels measured in the monitoring wells indicate a site-specific flow to the south-southwest. Plate 16 illustrates the approximate water level contours and flow direction based on the data generated during this study.

4.0 HISTORY OF POND 1

Pond number 1 was a 36,000 gallon wastewater treatment pond located approximately in the center of the facility. The pond was constructed in 1975 of 6" reinforced concrete. Company records indicate that the contents of the pond varied only slightly during the ten years of operation. Plate 17 presents the reactions, quantities and frequencies of chemicals used in pond 1. Sludge from this pond was periodically removed and disposed of in an approved facility. Representative hazardous waste monitoring of this sludge

removed during the period December 1981 to present are included in Appendix D. Reviewing the chemical reactions as outlined in plate 17 indicate that the pH of the pond was maintained above 6. The only exception to this was during the period between January 1983 and August 1984, chromic-sulfuric acid was added just prior (½ to 1 hour) to sludge removal. This mixing of pond sludge and acid was done to neutralize the acid so it would be accepted by the Class I landfill.

In August 1985 use of the pond was discontinued. After the pond was drained and cleaned, there were no visible signs of leakage, or of chemical degradation of the concrete. This was expected since the high pH of the pond precipitated gypsum which reinforced the pond's seal.

5.0 CHEMICAL DATA

5.1 Groundwater Samples

Groundwater samples were collected from monitoring wells 4A, 8, 9 and 10 between July 24, 1985 and August 30, 1985. Representatives of the Regional Board and Southern California Chemical Company were present during sampling and were provided split samples when requested.

Analyses of the water from the five monitoring wells are presented in Tables F and G. Chromium, cadmium and nitrates are below drinking water standards for all wells except MW 4. Monitoring well 4 contains levels up to 0.78 mg/l of cadmium, 500 mg/l of chromium, and 81 mg/l of nitrate (NO_3). Specific conductance of all the wells except MW 4A are above drinking water standards. This, however, is not uncommon

for shallow aquifers in the Los Angeles County. TOC was detected at levels up to 440 mg/l in MW 10 and up to 210 mg/l in MW 9. These are above background for this area. In addition, organic chemicals were detected in MW 4 at levels up to 10 mg/l. The laboratory data reports are indicated in Appendix.

5.2 Soil Samples

59 soil samples from the pond area were analyzed for pH, cadmium, chromium, copper, zinc, nickel, chloride, sulfate, ammonia nitrogen and carbonate. Thirty of these samples were analyzed by Brown & Caldwell Laboratories. These are presented on Tables D and E. The other 29 samples were analyzed by Southern California Chemical's in-house lab. Soil concentrations are presented on plates 18 through 23.

Chromium

Chromium values on site range from 30,000 mg/kg to 3.7 (Plate 18). The high values were detected in the old tank area with values up to 30,000 mg/kg at 5 feet, decreasing to 3,000 mg/kg at 35 feet. Beneath the pond, values increase from the 50 mg/kg range at 10 feet to 2,000 mg/kg at 30 feet.

pH

Values for pH ranged between 3.1 and 8.7 in the study area (Plate 19). Values beneath the pond were significantly lower than levels detected around the pond. This is significant since the pH levels of the product in the pond were between 6 and 13.

Copper

Copper was detected at levels between 13,000 mg/kg and 25 mg/kg in the study area. The higher levels (above 1,000 mg/kg) were detected in the old tank area. Beneath the pond values ranged between 100 and 500 mg/l (Plate 20).

Chloride

Chloride levels on site ranged between 420 mg/kg and 5,500 mg/kg. The highest level was detected in slant boring 2, 35 feet beneath the pond. Chloride in the old tank area ranged between 1,100 and 1,800 mg/kg (Plate 21).

Other Substances

Cadmium, zinc, nickel, sulfate, ammonia nitrogen, and carbonate were analyzed in selective samples. Except for the 15-foot sample of Boring 6, no significant levels of these substances were detected.

6.0 DISCUSSION

6.1 Water Quality

As part of Phase I of this study, seven monitoring wells were completed and sampled for all the RCRA requirements. Of all the monitoring wells, only one (MW4) had levels above the Primary Drinking Water Standards. Chromium, cadmium, and nitrates were detected in MW4. A second phase of investigation was undertaken to determine the horizontal and vertical extent of the chemical constituents in the groundwater. Four additional monitoring wells (MW4A, 8, 9, and

10) were installed around the wastewater pond. After sampling these new wells, it was determined that none of the substances detected above the Primary Drinking Water Standards in MW4 during Phase I exist above the standards in these new wells. At present therefore, the chemical compounds have only been identified in MW4. If it is assumed that the chemical constituent plume extends up to each of the nearest monitoring wells, the contamination plume is at the most 80 to 100 feet long (north - south) by 40 to 50 wide (east - west) and is contained within the site boundaries. In addition, the plume was not detected in MW4A, which was screened at a deeper interval (87 to 107 feet) then MW 4 (45 to 75 feet). The top of the confined aquifer beneath the pond is at 55 feet. Assuming the chemical constituents extend vertically to just above the 87-foot level, the maximum plume thickness at MW4 is approximately 32 feet.

During Phase I sampling, the Los Angeles Regional Water Quality Control Board (RWQCB) was provided split samples for analysis. In addition to the RCRA substances, as outlined in the original study plan, the RWQCB analyzed for organic chemicals. The RWQCB analysis indicated the presence of Toluene, Xylene, Ethylbenzene and a number of other organic compounds in the groundnwater beneath the site. Southern California Chemical then resampled and verified these analyses.

Once the maximum probable extent of the plume had been approximated, the source needed to be identified. The source of the organics has not yet been identified. Southern California Chemical Company is solely an inorganic chemical manufacturer. Company records

indicate that organic chemicals have never been used on site, even in laboratory quantities. It should be noted that eight of the surrounding neighbors are organic chemical plants. It is not known how organic compounds have migrated into the water sampled at MW4.

Review of company records indicates that the source of chromium in the water could be the result of one of three possibilities: the first is surface spillage before the plant was paved; the second is the wastewater pond; and the third is an underground storage tank that was removed 11-15 years previously and that apparently to have leaked. As will be discussed in the next two sections, the possibility that surface spillage was the source is still unknown. The waste water pond as the source is highly unlikely. The most likely source is the old tank area.

6.2 Soil Quality

In order to determine the source of the contaminated groundwater, an additional set of soil borings were drilled. Two of these borings (B1 and B2) were slant drilled adjacent to and under the pond. The other four (B3, B4, B5 and B6) were drilled vertically to attempt to locate the site of the old underground tank. Company records indicated that this tank was located 40 to 50 feet to the northeast of pond number 1. This tank contained a chrome etching solution which was a chrome, copper, chloride, ammonia, nitrogen and sulfate mixture and was low in pH. From the borings and the monitoring wells (MW4, 4A, 8, 9 and 10), selected soil samples were analyzed. The results of these analyses are presented in Tables D and E and illustrated on plates 18 to 23.

Review of the data in Tables D and E indicate elevated levels of chromium in the shallow soils at the site of the old tank. These levels decrease with depth, which suggests a surface or near surface source existed/exists in this area. The data from borings B1 and B2 beneath the pond indicate that the chromium levels at the 10 foot depth are relatively low but the levels increase with depth. This suggests that the chromium is not coming from a surface source in this area, but is migrating under the pond from an outside source.

Analysis of the pH data from Table 19 provides a second and more convincing indicator that the chromium is apparently migrating under the pond from a source outside of the pond area. As discussed in Section 4.0, the liquid in the pond was maintained between pH 6 and 13. The pH values of the soil from borings B1 and B2 under the pond are neutral or acidic (pH 8-3.9) at shallow depths, and decrease to pH 5.5 to 3.3 with increasing depth. This indicates that the low pH source is most likely migrating laterally under the pond from an outside source.

The pH of the old chromium tank was in the range of 1 to 3, which explains the low pH values in the tank area.

Copper is another element which, like chromium and pH, has higher levels in the old tank area and low levels at shallow depths beneath the pond. The levels increase with depth. This also suggests that the old tank area is the probable source of the chemical constituents beneath the pond.

Further demonstration of this theory is provided by nitrogen (as ammonia) and sulfate. Both of these chemicals were used in the

wastewater pond. Both are only found at elevated levels in the tank area (in particular, in B6). Both were detected at only low levels beneath the pond.

Chloride is the only chemical that has higher values in the soils beneath the pond than in the tank area. This is to be expected since chloride is the most soluble and conservative of the substances that were stored in the old tank, and would have been easily displaced in the near surface by soil moisture migration once the source was removed.

6.3 Vadose-Zone Transport

Migration of contaminants from the old tank area to under the pond area likely occurred as unsaturated-zone migration, which is dissimilar to the forces governing saturated-zone migration. Capillary forces and gravitational attractions predominate, resulting in a downward migration except in those areas where fine-grained materials (silts and clays) overlie clean sands. In this case, capillary forces resist the vertical drainage from the fine-grained material until such time as the field capacity of the material is exceeded, at which time a "break through" of fluid will migrate downward through the sand to form a perched layer at the sand base. This explains the observed presence of high levels of chromium in the fine-grained layers, low levels in the upper portions of the sand layer, and high levels at the base of the sand.

Carbonate material present in the silts and sands have reacted with acidic material in the seepage to sequentially precipitate copper, but not hexavalent chromium.[11]

7.0 CONCLUSIONS

The following general conclusions can be drawn from the foregoing data. Future studies may add to, and/or change these conclusions.

1. A confined aquifer exists beneath the site with a potentiometric surface between approximately 42 to 45 feet below ground level.
2. The general direction of groundwater flow is to the south-southwest.
3. Relatively low permeability soils were encountered from the surface to approximately 10 feet below ground surface. A second low permeability zone was encountered at approximately 25 to 50 feet below ground surface.
4. Based on the chemical data presented in this report, there is no evidence that leakage of pond number 1 has occurred.
5. The elevated levels of chrome and copper detected under the pond appear to have been due to leakage from the old tank area.
6. Waste from the old tank area migrated vertically through the vadose zone to the base of the 30 foot sand and then laterally under the pond.

8.0 RECOMMENDATIONS

1. Immediately implement groundwater extraction to remove high levels of chromium and organics in the vicinity of MW 4.

2. Promptly implement the pilot study to determine the optimum treatment procedure for possible in site treatment of the soil in the old tank area.

9.0 REFERENCES

The references used in the preparation of this preliminary report include, but are not limited to, the following:

1. U.S.G.S. Topographic Map, Whittier Quadrangle, 1981.
2. DWR Bulletin 104, Appendix A.
3. Division of Water Rights, map, Location of Water Wells.
4. Watermaster Service Central Basin, Los Angeles County, July 1, 1981 - June 30, 1982.
5. Watermaster Service Central Basin, Los Angeles County, July 1, 1982 - June 30, 1983.
6. DWR Bulletin 8.
7. DWR Bulletin 63, Appendix A.
8. Report on TCE Investigation, Los Angeles Regional Water Quality Control Board, April 1980.
9. Coastal Plain Ground Water Contours, Shallow Aquifer, Los Angeles Flood Control District, map no. 2-H240, Fall 1975.
10. Southern California Chemical Company records.
11. Rouse and Pyrih, (1985) "International Conference on New Frontiers in Waste Management."

10.0 LIMITATIONS

The conclusions and recommendations in this report are based on:

1. The 11 test borings performed at this site.
2. The observations of our field personnel.
3. The results of laboratory tests performed by Brown and Caldwell Laboratories.
4. The results of the land survey conducted by Combs/Rodriguez & Associates Land Surveying.
5. Measurements of groundwater elevations in the five monitoring wells.
6. Referenced documents.

It is possible that variations in the soil or groundwater conditions could exist beyond the points explored in this investigation. Also, changes in the groundwater conditions found could occur at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors. The services performed by J.H. Kleinfelder & Associates have been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the Los Angeles County Area. No other warranty, expressed or implied, is made.

Respectfully submitted,

J.H. KLEINFELDER & ASSOCIATES

Kenneth L. Durand
Hydrogeologist

Randolph C. Harris
Senior Hydrogeologist
R.G. #3708

KLD:RCH:ga

Attachments

TABLE A

MONITORING WELL AND BORING DEPTHS

Boring Number	Depth (ft)	Soil Boring or Monitoring Well	Perforated Interval (ft)
B1	50	Soil Boring	--
B2	40	Soil Boring	--
B3	15	Soil Boring	--
B4	30	Soil Boring	--
B5	30	Soil Boring	--
B6	30	Soil Boring	--
MW4	75	Monitoring Well	45 - 75
MW4A	107	Monitoring well	87 - 107
MW8	76	Monitoring Well	46 - 76
MW9	77	Monitoring Well	47 - 77
MW10	75	Monitoring Well	45 - 75

TABLE B

CHEMICALS USED IN POND NUMBER 1

Ammonium sulfate solution

Sodium chloride solution

Ferrous hydroxide solution

Copper ammonium chloride solution

Chromic-sulfuric acid solution *

Sodium sulfate solution

Sulfuric acid solution

Ammonium chloride

Free ammonium

Copper sulfide

Iron sulfide

Chrome sulfide

Nickel sulfide

Zinc sulfide

Lead sulfide

NOTES: * See discussion in Section 4.0 concerning Chromic-sulfuric acid solution.

TABLE C

* WATER ANALYSIS PERFORMED

Drinking Water Parameters	Parameters Establishing Groundwater Quality	Parameters Indicating Groundwater Contamination*
Arsenic	Chloride	**pH
Borium	Iron	**Specific Conductance
**Cadmium	Manganese	**TOC
**Chromium	Phenols	**TOX
Fluoride	Sodium	
Lead	Sulfate	
Mercury		
**Nitrate		
Selenium		
Silver		
Endrin		
Lindane		
Methoxphlor		
Toxaphene		
2,4-D		
2,4,5-TP Silver		
Rodium		
Gross Alpha		
Coliform Bacteria		

Additional Analysis as required by DOHS & RWQCB

Ammonia
Sulfides
Hexavalent Chrome
Nickel
Zinc

NOTES: * = Groundwater indicator parameters performed in quads
** = Water analysis performed in Phase II study.

TABLE D

TABULATION OF SOIL DATA

(mg/kg)

Boring #	Depth	pH	Cadmium	Chromium	Copper	Zinc	Nickel	Chloride	Sulfate	Ammonia Nitrogen	Carbonate
B1	10	8.0	--	53	470	--	--	--	--	--	--
	15	7.0	--	13	130	--	--	--	--	--	--
	40	3.9	1.5	600	400	180	--	5100	20	29	ND
	50	5.5	8.0	280	160	95	--	2600	71	10	ND
B2	15	3.9	--	54	390	--	--	--	--	--	--
	20	3.9	--	440	230	--	--	--	--	--	--
	35	3.3	1.2	2000	250	120	--	5500	41	42	ND
	40	3.3	1.4	150	550	170	--	2900	45	11	ND
B3	5	8.1	--	420	1200	--	--	--	--	--	--
	15	6.3	ND 0.67	11	31	57	--	1100	110	23	ND
B4	5	4.6	--	10000	480	--	--	--	--	--	--
	10	4.0	ND 0.62	16000	820	92	--	--	--	--	--
	25	4.2	ND 0.61	550	1200	52	--	1400	450	25	ND
B5	5	8.7	--	85	230	--	--	--	--	--	--
	10	8.3	--	30	78	79	26	--	--	--	--
	15	4.8	--	3200	12000	--	--	1600	170	21	ND
	25	4.5	--	49	160	34	12	--	--	--	--
B6	5	4.5	--	3700	460	--	--	--	--	--	--
	15	3.6	--	5100	4100	430	240	1800	2000	500	ND
	25	4.2	--	1500	1400	43	98	--	--	--	--

Notes = Depth is in feet
ND 0.67 = Not Detected at 0.67 mg/kg (ppm)

TABLE E

TABULATION OF SOIL DATA

(mg/kg)

Boring #	Depth	pH	Cadmium	Chromium	Copper	Zinc	Nickel	Chloride	Sulfate	Ammonia Nitrogen	Carbonate
4	10	--	--	16	37	52	21	--	--	--	--
	30	--	--	19	50	72	25	--	--	--	--
4A	10	4.9	--	14	410	110	31	--	--	--	--
	25	6.2	--	67	24	150	9.7	2700	79	29	ND
8	10	7.3	--	41	61	96	27	--	--	--	--
	25	8.5	--	37	94	54	ND 3.1	510	50	10	--
9	15	6.9	--	15	28	55	19	4800	67	8.4	ND
	25	7.4	--	4.3	18	29	4.6	--	--	--	--
10	10	8.3	--	31	89	100	28	--	--	--	--
	25	7.3	--	5.3	25	30	6.4	470	67	66	ND

NOTES: Depth is in feet beneath ground surface.
ND 3.1 = Not Detected at 3.1 mg/kg (ppm).

TABLE F

TABULATION OF WATER DATA

(mg/l)

	MW4	MW4A	MW8	MW9	MW10
Cadmium	0.78	ND 0.01	ND 0.01	ND 0.01	ND 0.01
Chromium (Total)	500	ND 0.03	ND 0.03	ND 0.03	ND 0.03
Chromium (Hexavalent)	500	ND 0.5	ND 0.5	ND 0.5	ND 0.5
pH	6.3	6.8	6.6	6.4	6.8
Conductivity	6400	1500	2800	2200	2100
TOC	36	40	99	210	440
Nitrate as NO_3	81	20	5.8	6.3	ND 0.44
as N	18	4.5	1.3	1.4	ND 0.10

NOTES: MW 4 was sampled March 1985 per RCRA requirements. A complete list of the substances analyzed are included in the phase 1 report. MW 4A, 8, 9 and 10 were sampled August 1985 for the substances that are above drinking water standards in the March sampling and for the groundwater indicator parameters.

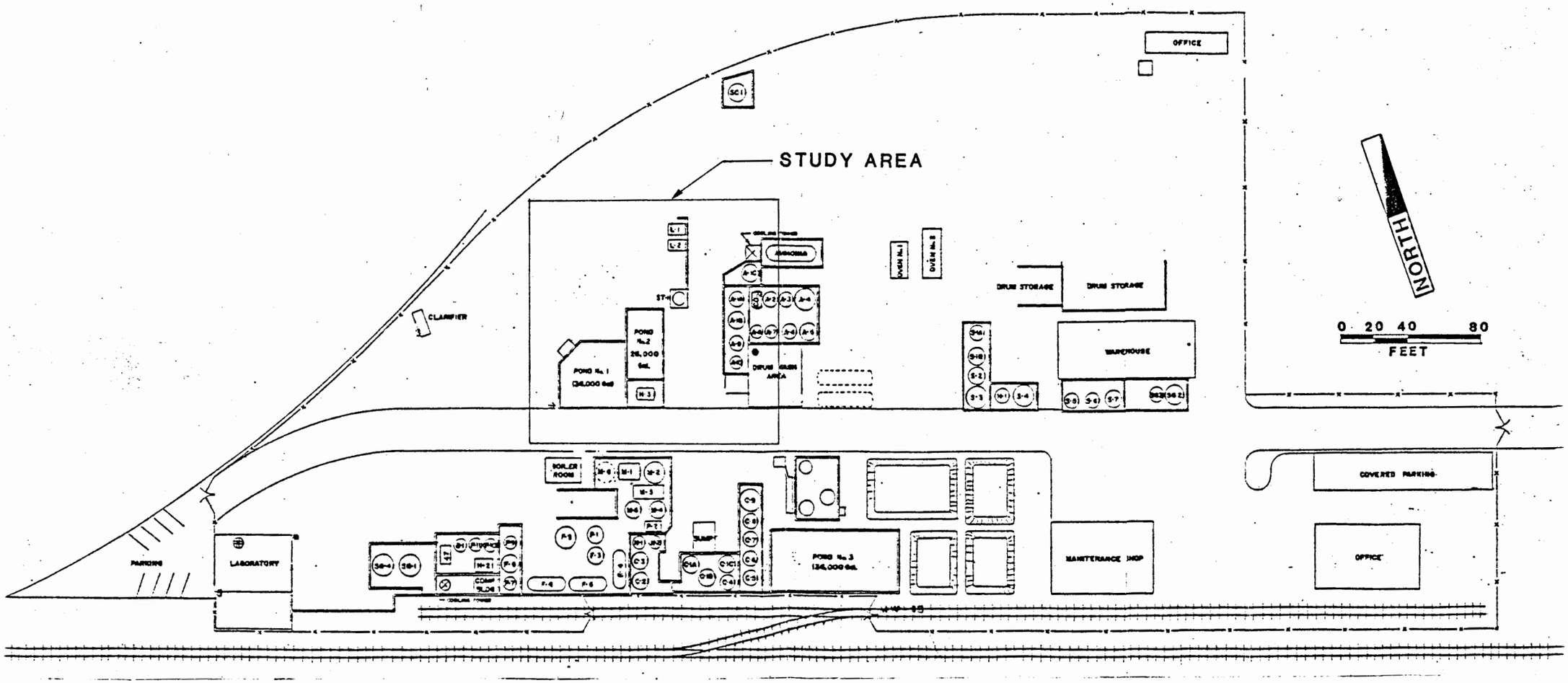
TABLE G

TABULATION OF WATER DATA

(mg/l)

	MW 4	
	DOHS	B & C
1,1 Dichloroethane	41	100
1, Dichloroethylene	52	100
Benzene	3.7	ND 50
Carbon Tetrachloride	--	ND 50
Chloraform	24	ND 50
Ethylbenzene	2100	3000
Methylene Chloride	93	100
Trichloroethylene	225	550
Toluene	4500	8300
trans-1, 2-Dichloroethylene	14	ND 50
Phenols	0.001	ND 50
Perchloroethylene	--	ND 50
1,2 dichloroethane	13	ND 50
Semi-quantified Xylene		10,000
O-xylene	1,100	
N-P-xylene	2,000	

NOTES: DOHS = Department of Health Services data
B & C = Brown and Caldwell data



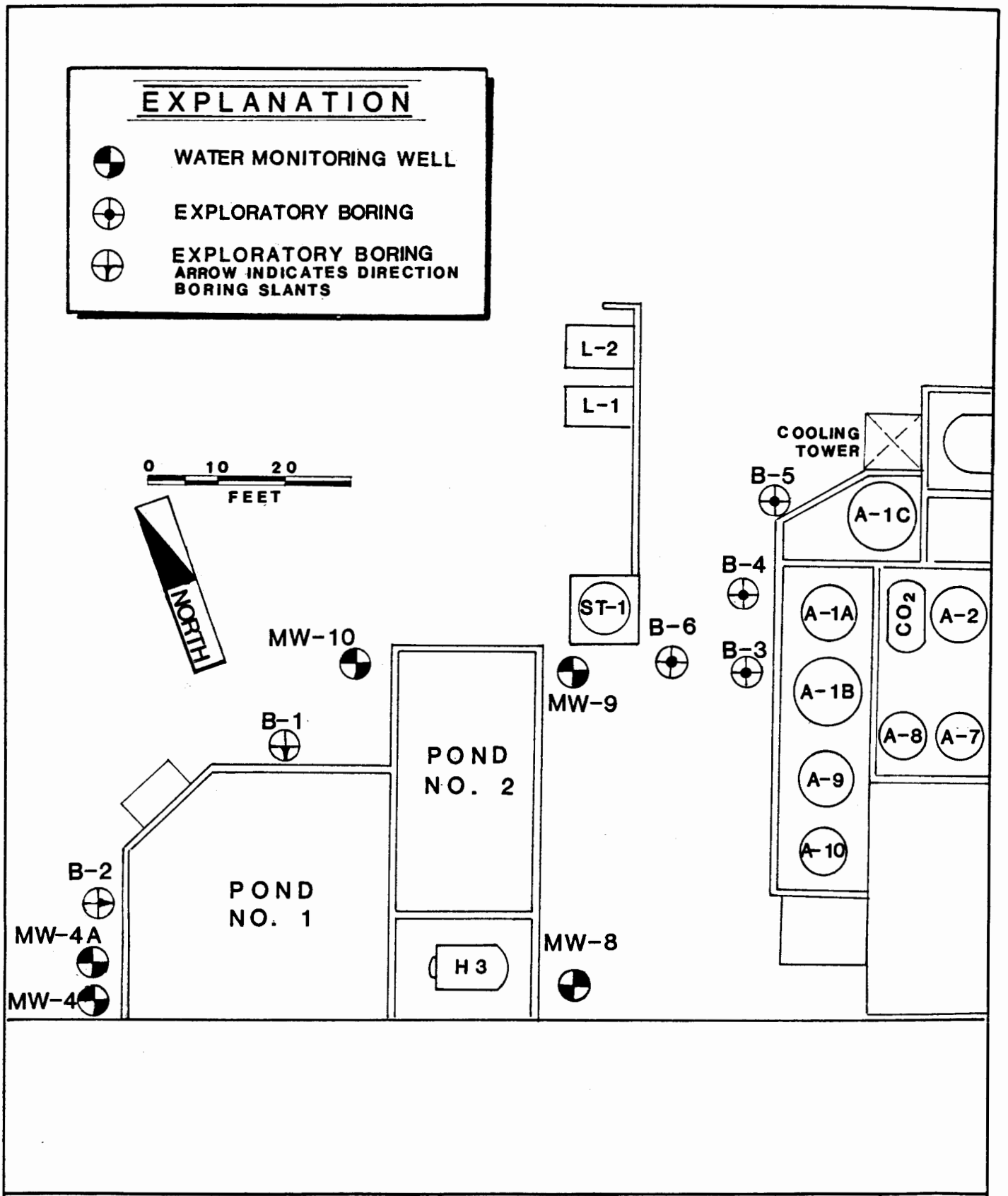
J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. Q1014-2

SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CA.

SITE PLAN

PLATE
1



J.H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS • MATERIALS TESTING	SOUTHERN CALIFORNIA CHEMICA SANTA FE SPRINGS, CA. BORING/WELL LOCATIONS	PLATE 2
PREPARED BY: DATE:		
CHECKED BY: DATE:	PROJECT NO. Q 1014-2	

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		LTR	DESCRIPTION
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravels or gravel sand mixtures, little or no fines.
		GP	Poorly-graded gravels or gravel sand mixture, little or no fines.
		GM	Silty gravels, gravel-sand-clay mixtures.
		GC	Clayey gravels, gravel-sand-clay mixtures.
	SAND AND SANDY SOILS	SW	Well-graded sands or gravelly sands, little or no fines.
		SP	Poorly-graded sands or gravelly sands, little or no fines.
		SM	Silty sands, sand-silt mixtures.
		SC	Clayey sands, sand-clay mixtures.

MAJOR DIVISIONS		LTR	DESCRIPTION
FINE GRAINED SOILS	SILTS AND CLAYS LL<50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity.
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
		OL	Organic silts and organic silt-clays of low plasticity
	SILTS AND CLAYS LL>50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays.
		OH	Organic clays of medium to high plasticity.
HIGHLY ORGANIC SOILS		Pt	Peat and other highly organic soils.


Standard penetration split spoon sample


Modified California sampler


Shelby tube sample

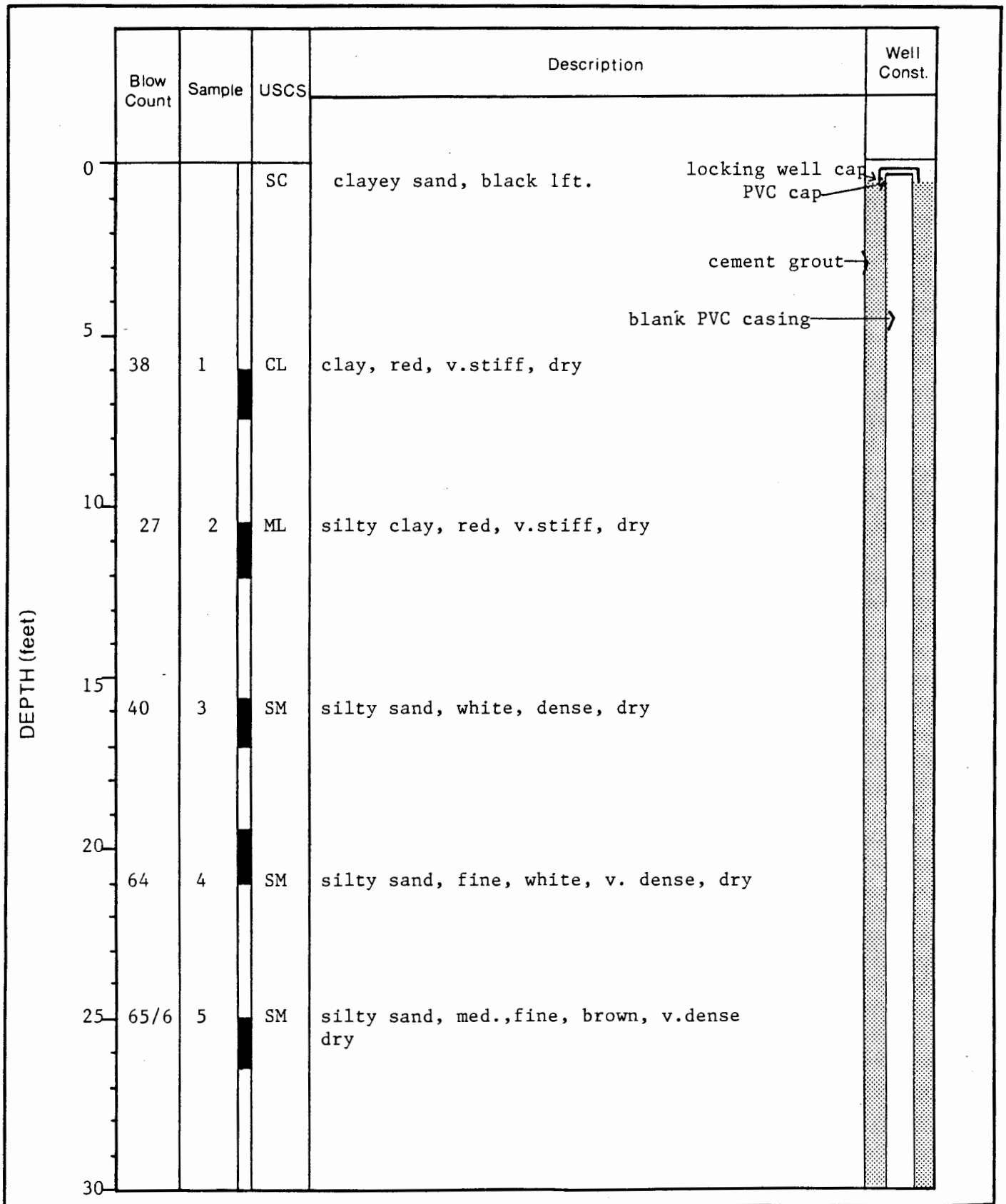

Water level observed in boring

* No recovery

NFWE No free water encountered

NOTE: The lines separating strata on the logs represent approximate boundaries only. The actual transition may be gradual. No warranty is provided as to the continuity of soil strata between borings. Logs represent the soil section observed at the boring location on the date of drilling only.

J.H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS • MATERIALS TESTING	BORING LOG LEGEND	PLATE 3
PREPARED BY: DATE:		
CHECKED BY: DATE:	PROJECT NO.	



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PREPARED BY: JF DATE: 5/85

CHECKED BY: DATE:

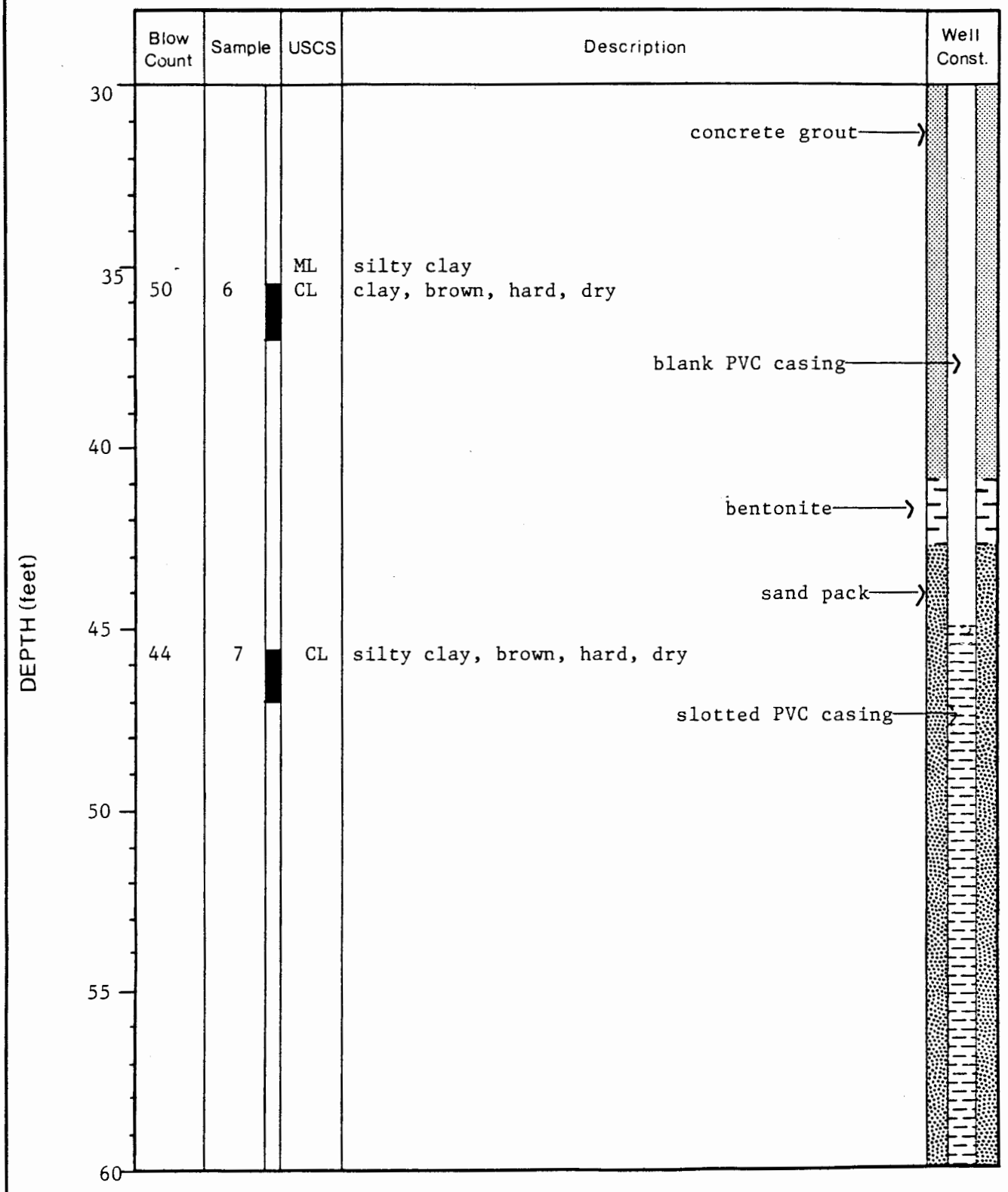
So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-4

PROJECT NO. Q-1014-1

PLATE

4



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PREPARED BY: JF DATE: 5/85

CHECKED BY: DATE:

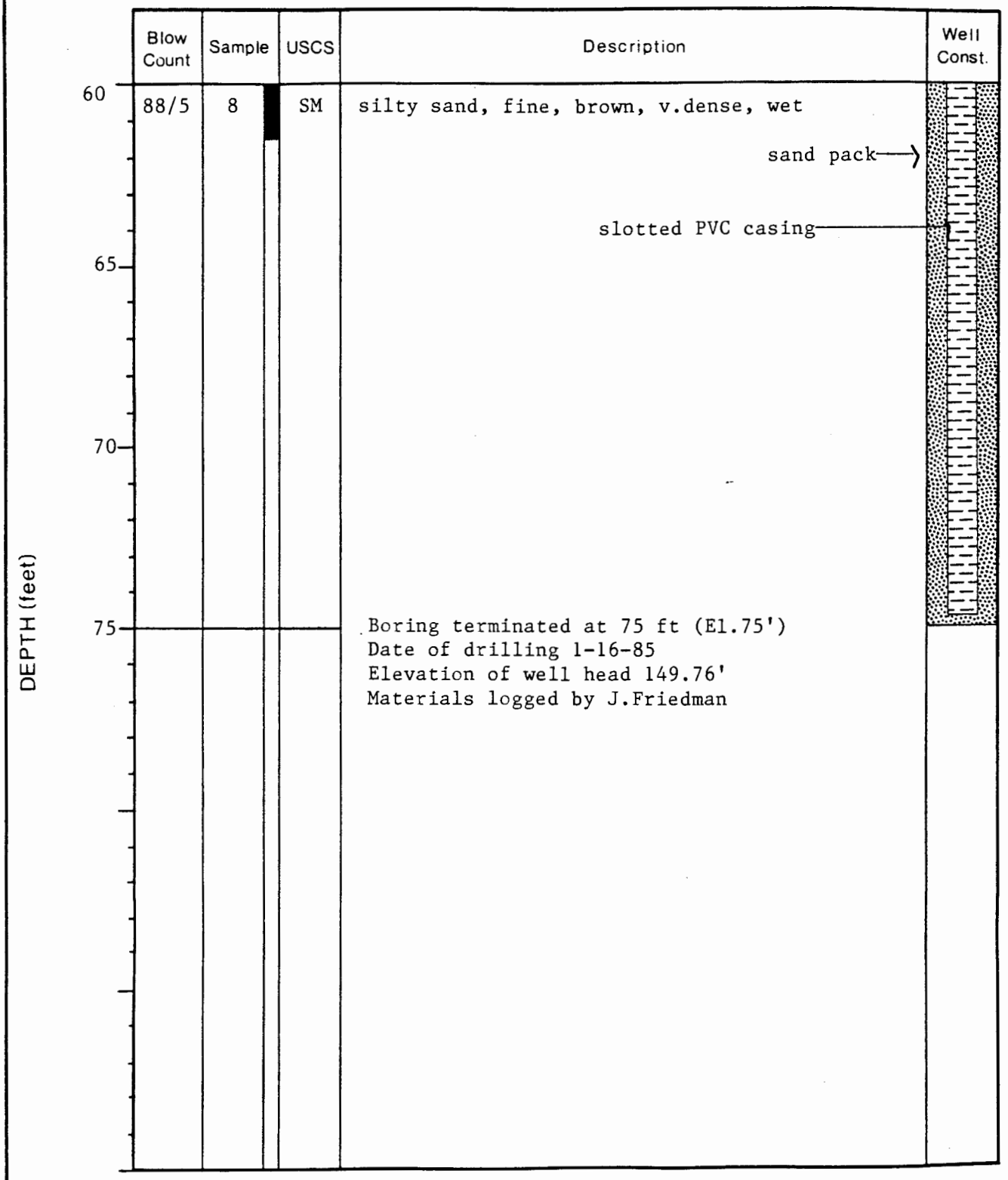
So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING **MW-4**

PROJECT NO. 0-1014-1

PLATE

4



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PREPARED BY: JF DATE: 5/85

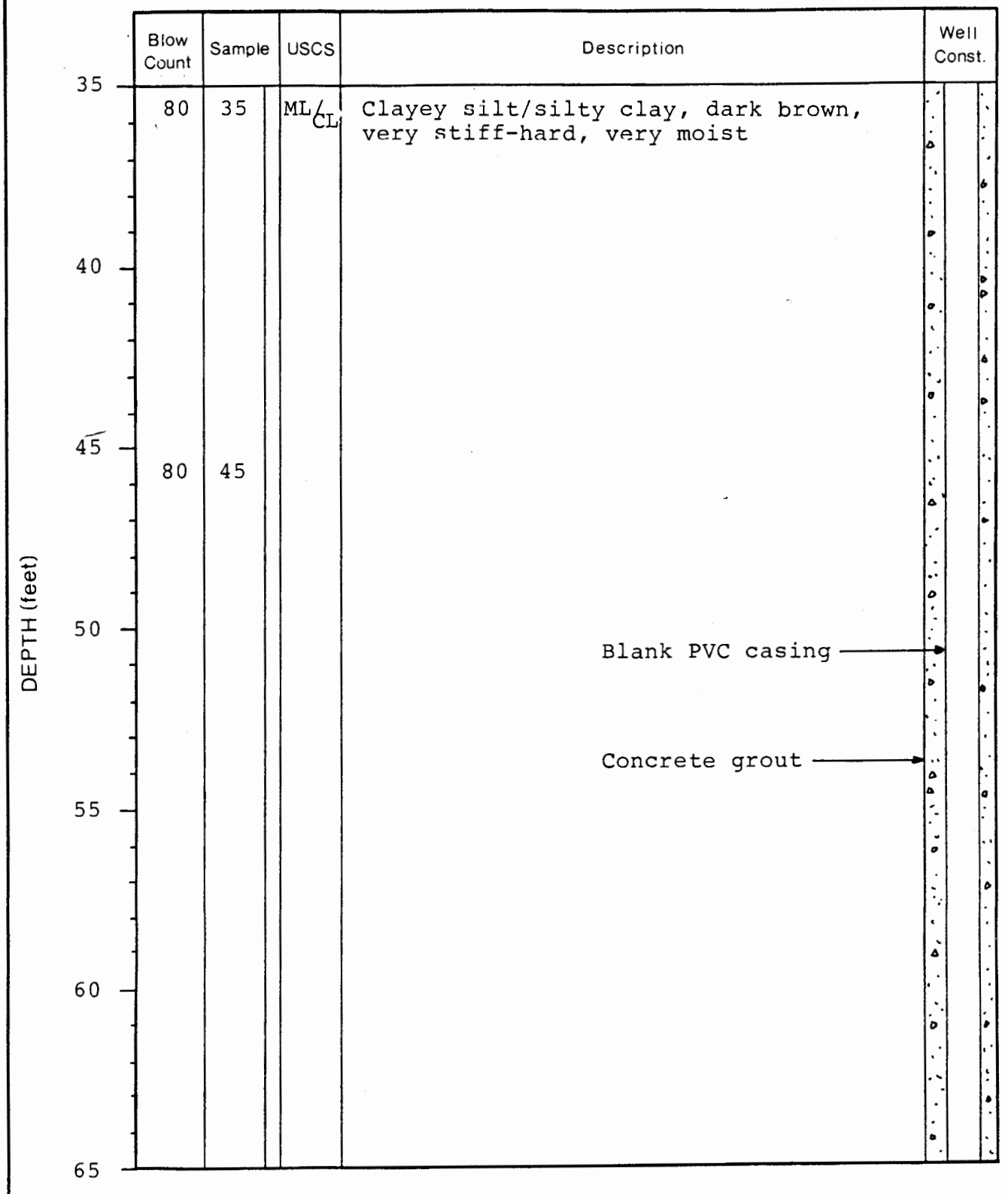
CHECKED BY: DATE:

So. Calif. Chemical
Santa Fe Springs, Ca.

LOG of BORING MW-4

PROJECT NO. Q-1014-1

PLATE 4



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Southern California Chamical

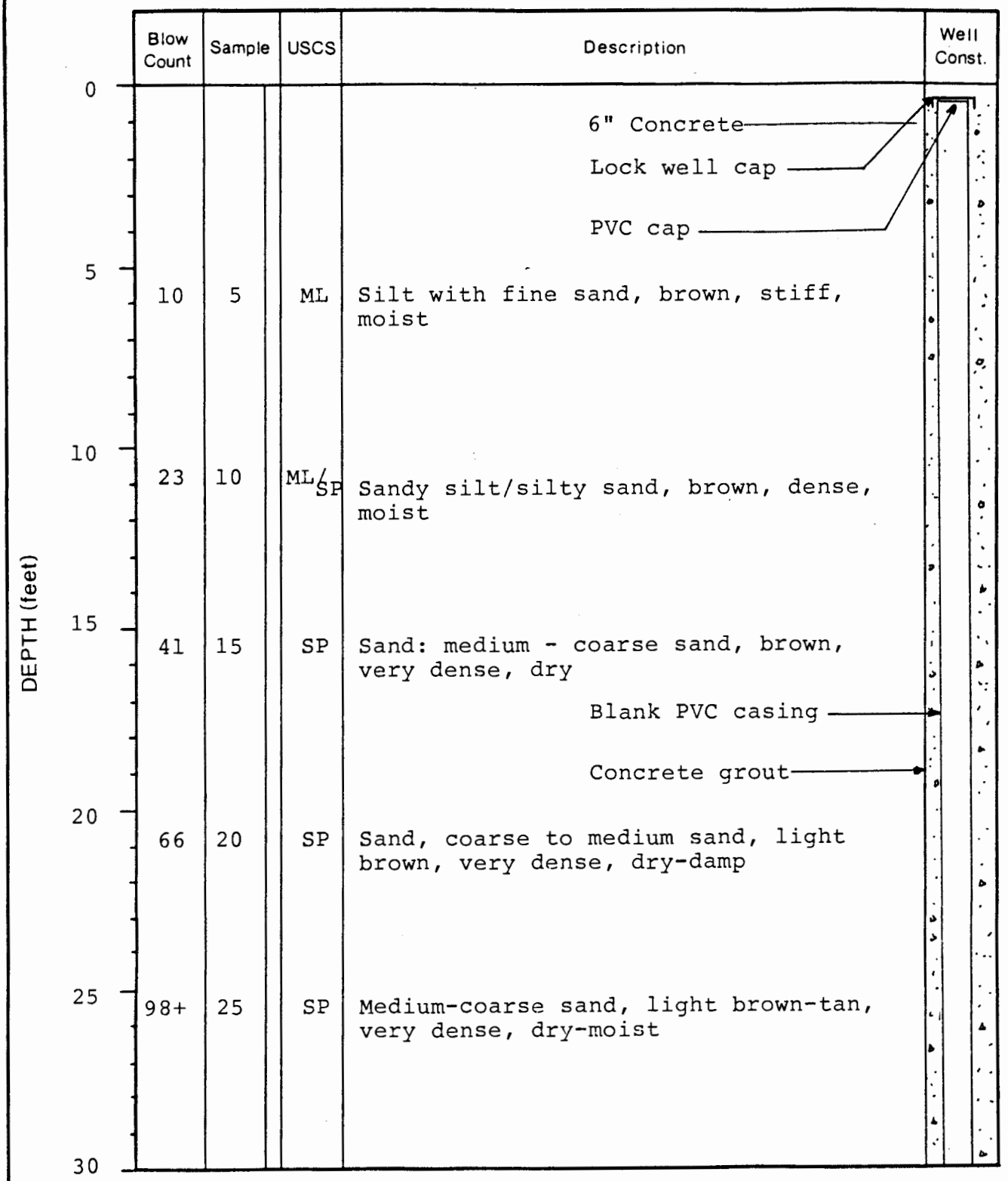
LOG of BORING **MW-4A**

PLATE **5**

PREPARED BY: DATE:

CHECKED BY: DATE:

PROJECT NO. Q-1014-2



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PREPARED BY: DATE:

CHECKED BY: DATE:

Southern California Chemical

LOG of BORING MW-4A

PROJECT NO. Q-1014-2

PLATE 5

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
100	82	100	ML	Silt & very fine sand, brown, very dense, wet	
				Slotted PVC casing →	
105		105	ML	Silt, occasional clast 72cm, brown, dense, damp	
				Sand pack →	
110	75	110		Silty sand, brown, very dense, wet	
	75		SM/SP	Sand, fine-medium, very dense, wet	
				Boring terminated at 110'. Date of drilling 7-10-85. Materials logged by Ken Durand.	

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PREPARED BY: DATE:

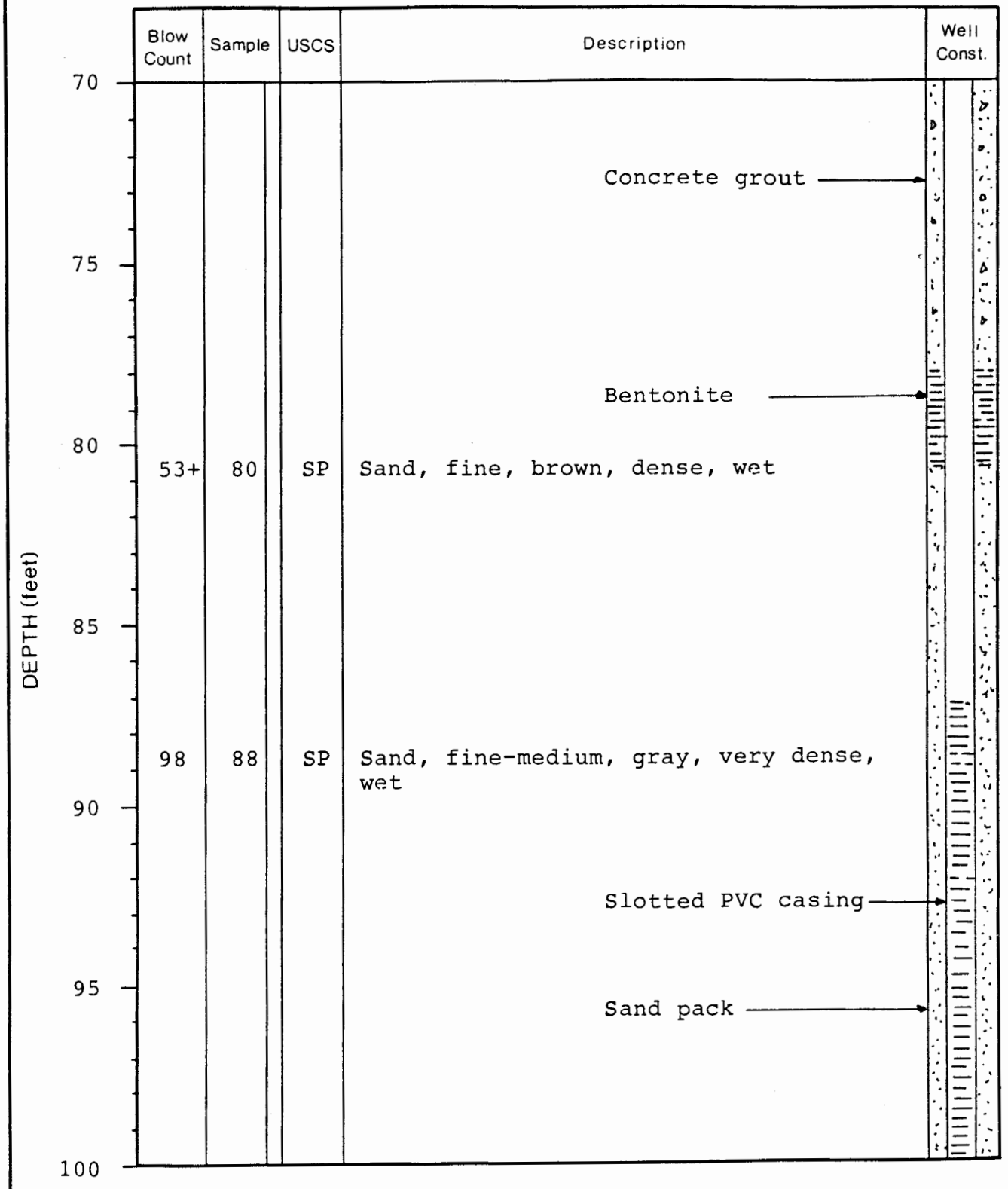
CHECKED BY: DATE:

Southern California Chemical

LOG of BORING MW-4A

PROJECT NO. Q-1014-2

PLATE 5



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Southern California Chemical

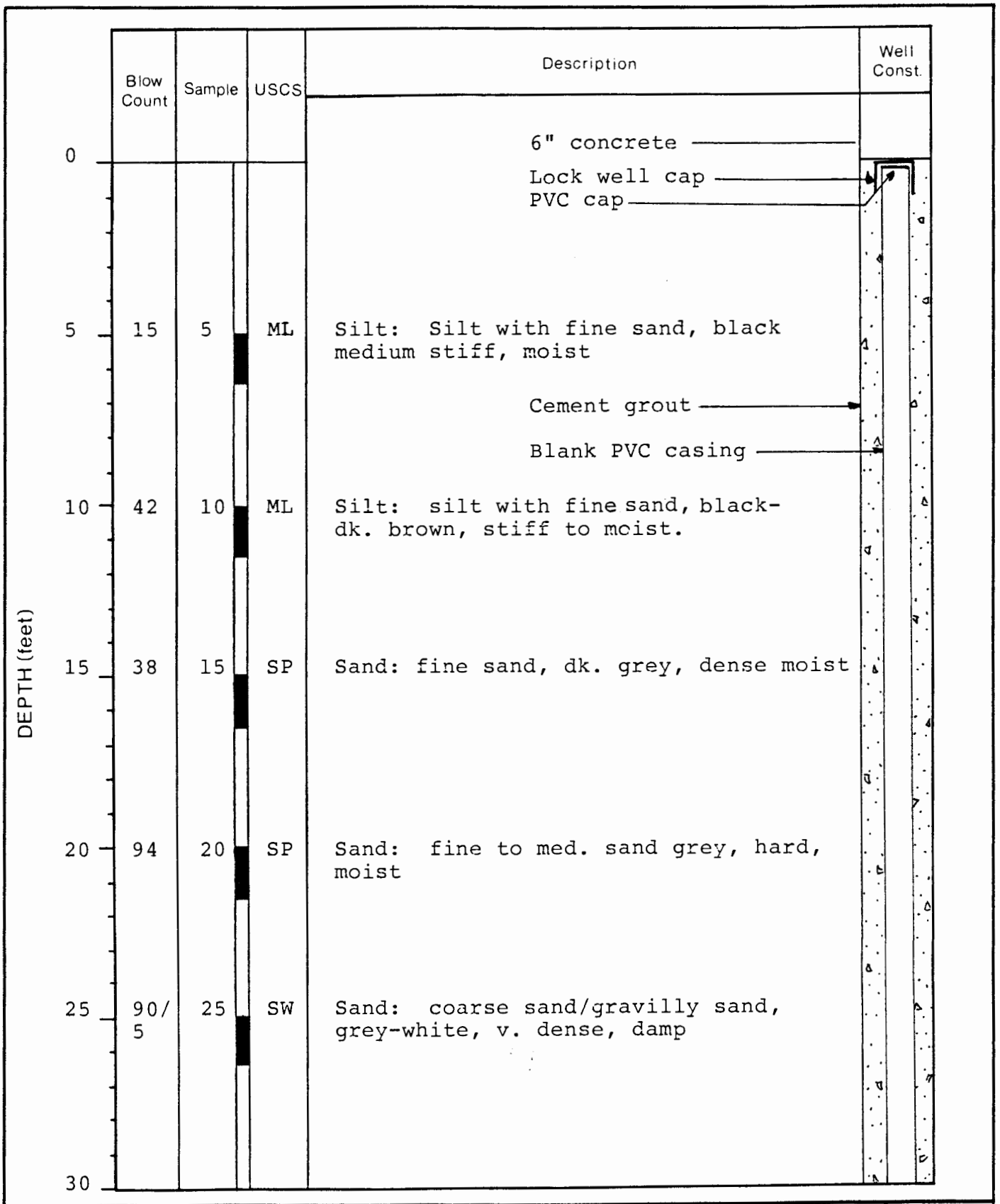
LOG of BORING **MW-4A**

PLATE **5**

PREPARED BY: DATE:

CHECKED BY: DATE:

PROJECT NO. Q-1014-2



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So. Cal. Chemical
SANTA FE SPRINGS, CALIF.

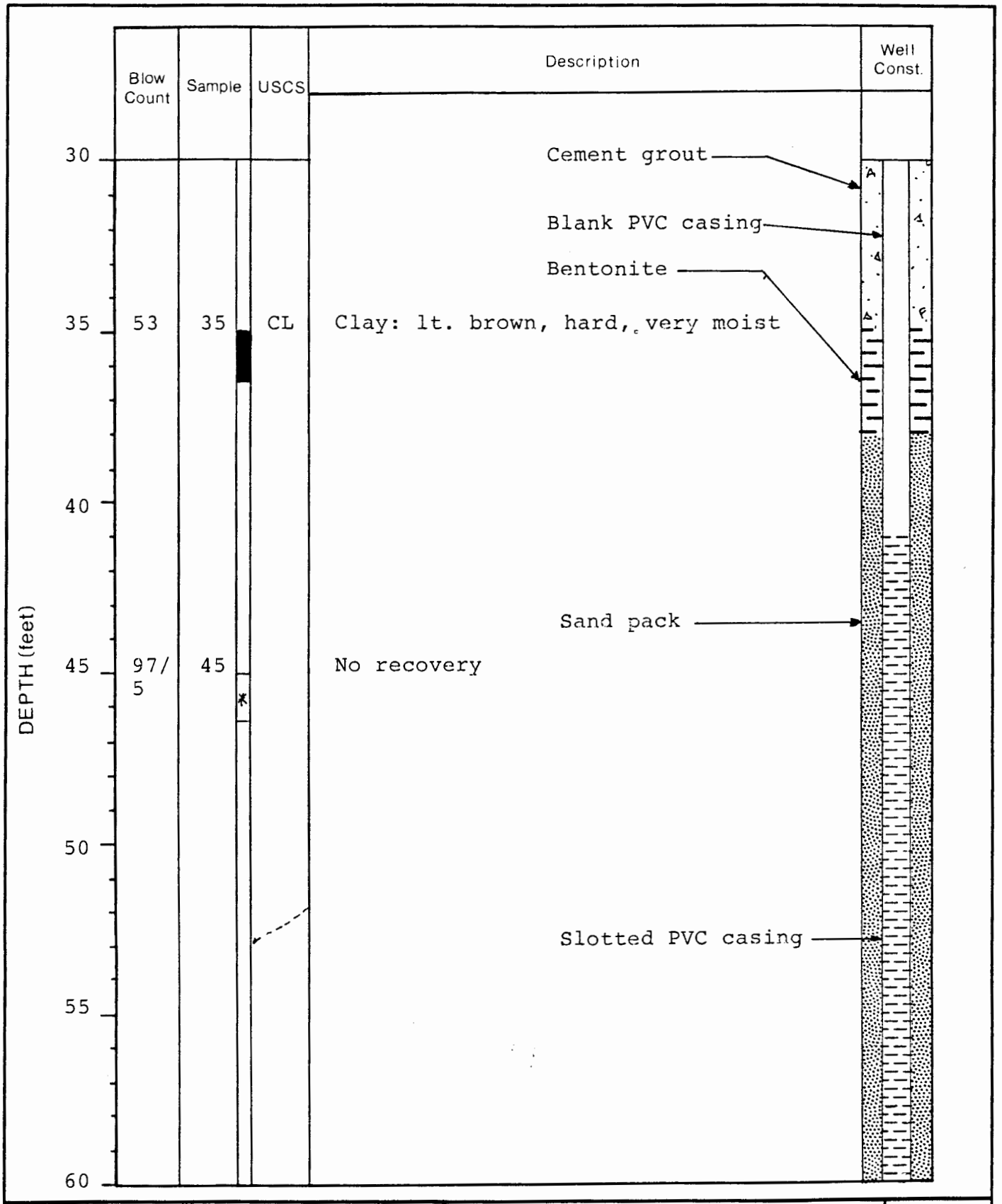
LOG of BORING **MW-8**

PLATE **6**

PREPARED BY: DATE:

CHECKED BY: DATE:

PROJECT NO. 01014-2



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So. Chemical Co.

SANTA FE SPRINGS, CALIFORNIA

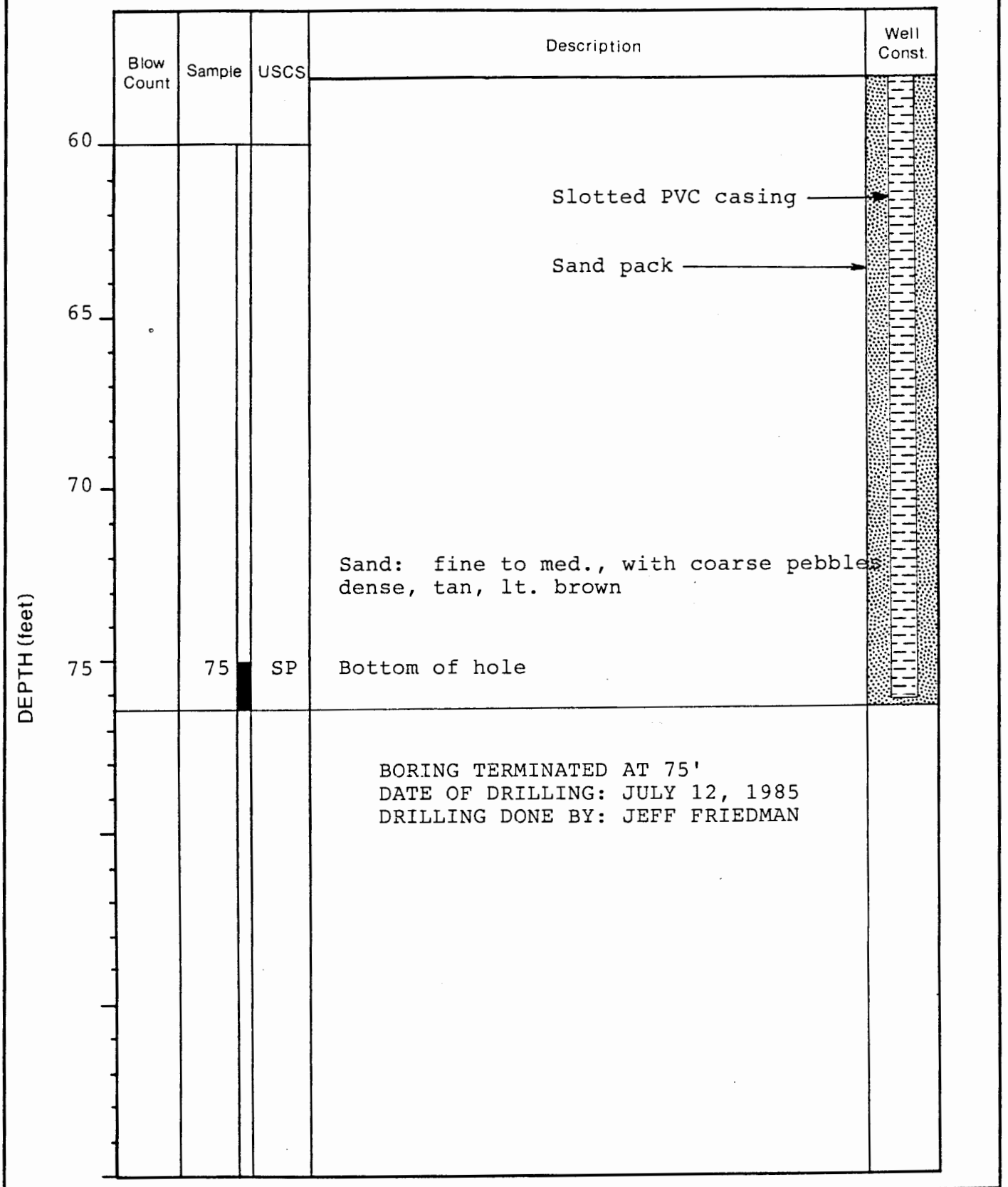
LOG of BORING **MW-8**

PLATE **6**

PREPARED BY: DATE:

CHECKED BY: DATE:

PROJECT NO. Q1014-2



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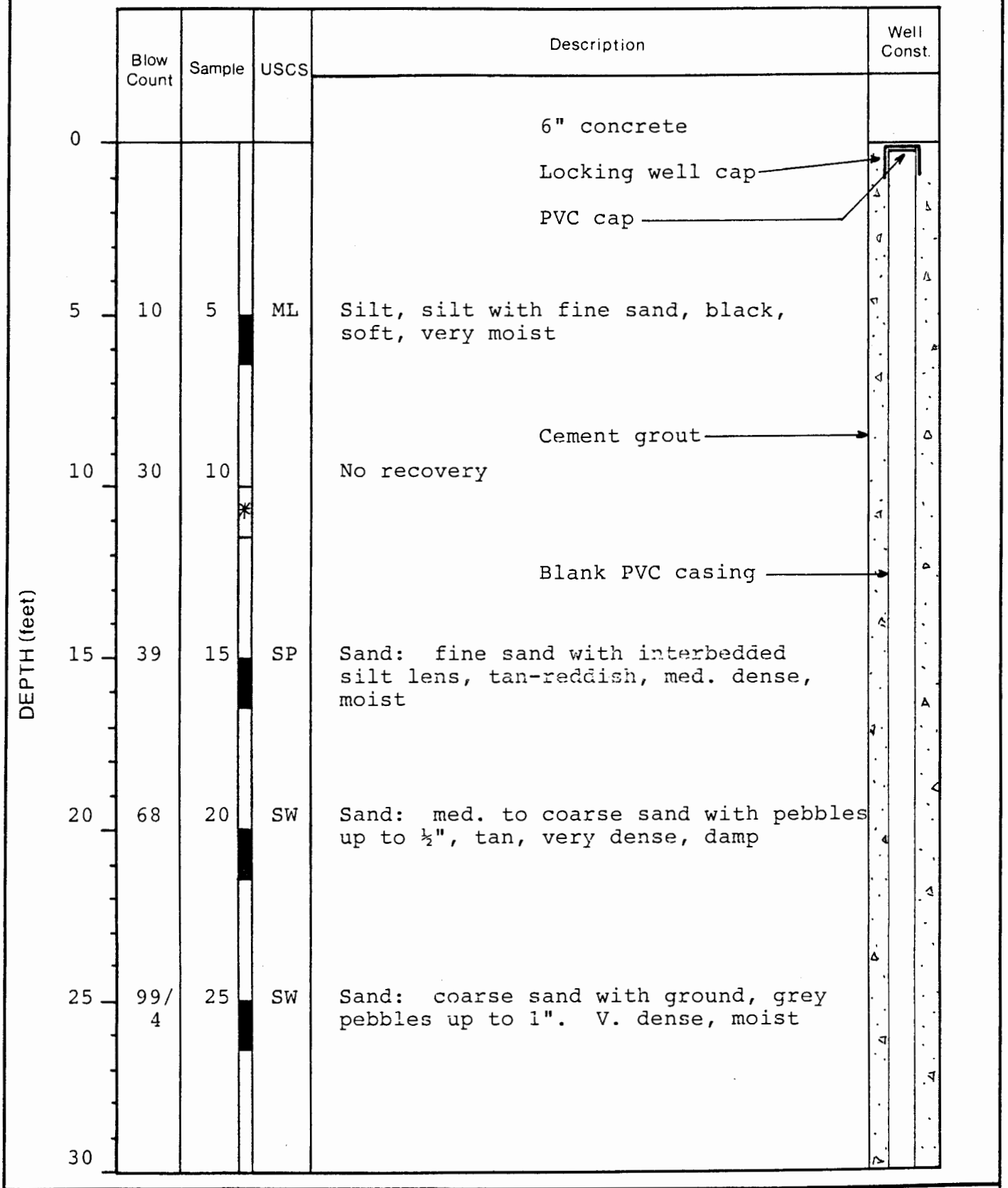
So. Chemical Co.
SANTA FE SPRINGS, CALIFORNIA

LOG of BORING **MW-8**

PLATE
6

PREPARED BY: DATE:
CHECKED BY: DATE:

PROJECT NO. Q1014-2



J.H. KLEINFELDER & ASSOCIATES
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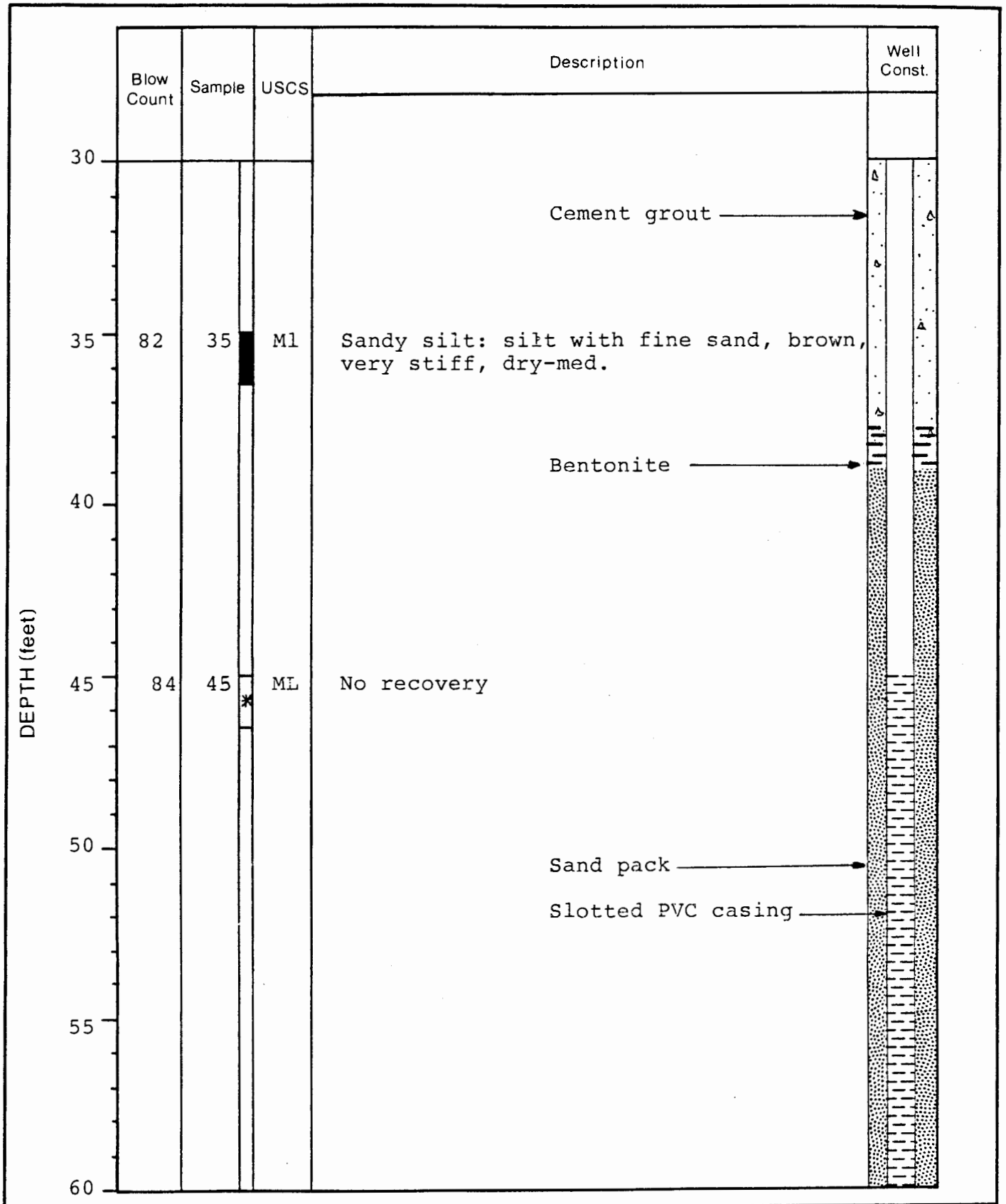
So. Cal. Chemical Co.
SANTA FE SPRINGS, CALIFORNIA
LOG of BORING MW-9

PLATE 7

PREPARED BY: DATE:
CHECKED BY: DATE:
PROJECT NO. Q1014-2



J.H. KLEINFELDER & ASSOCIATES
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So. Cal. Chemical Co.
SANTA FE SPRINGS, CALIFORNIA

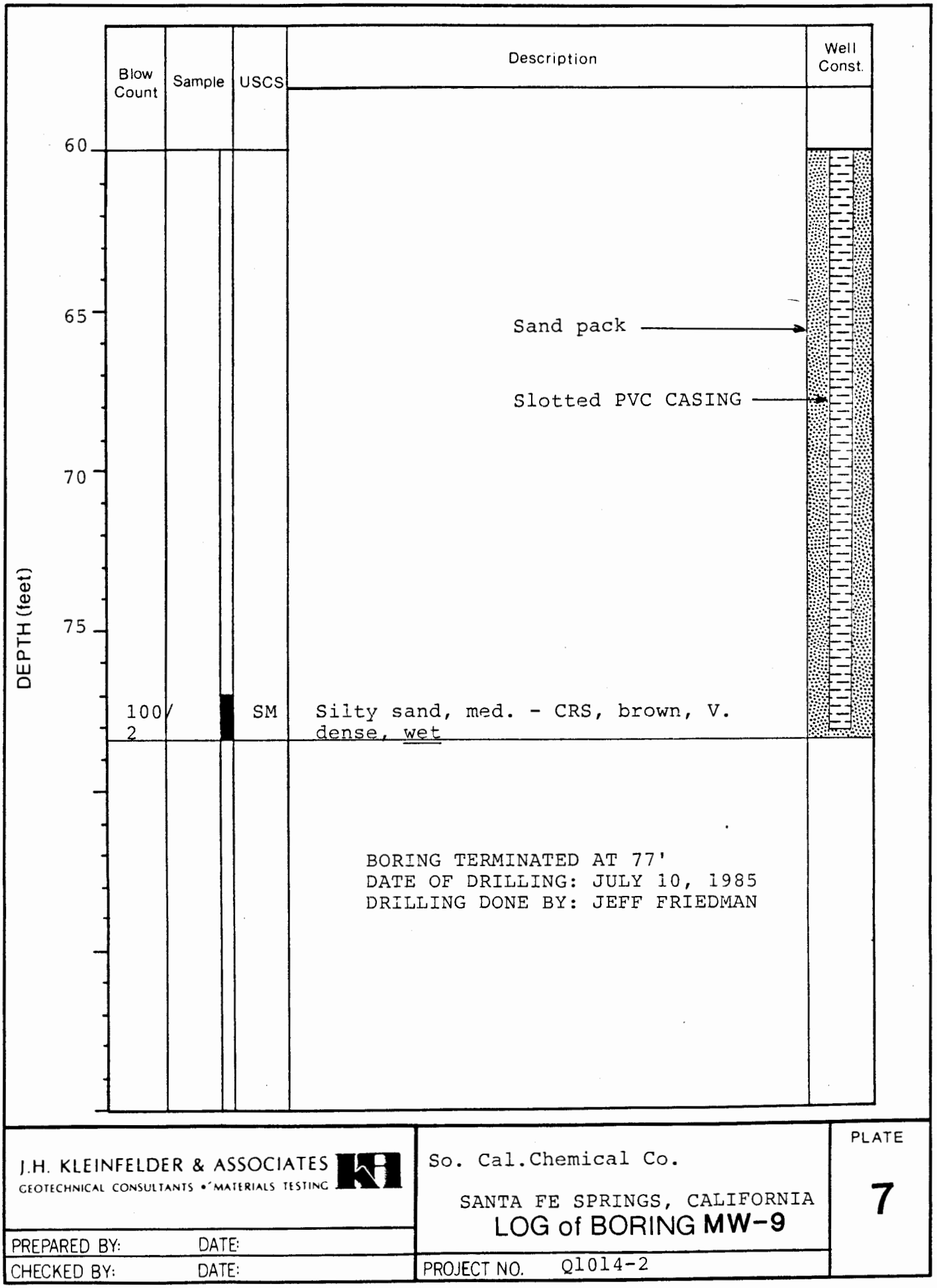
LOG of BORING MW-9

PLATE 7

PREPARED BY: DATE:

CHECKED BY: DATE:

PROJECT NO. Q1014-2



J.H. KLEINFELDER & ASSOCIATES
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PREPARED BY: DATE:

CHECKED BY: DATE:

So. Cal.Chemical Co.

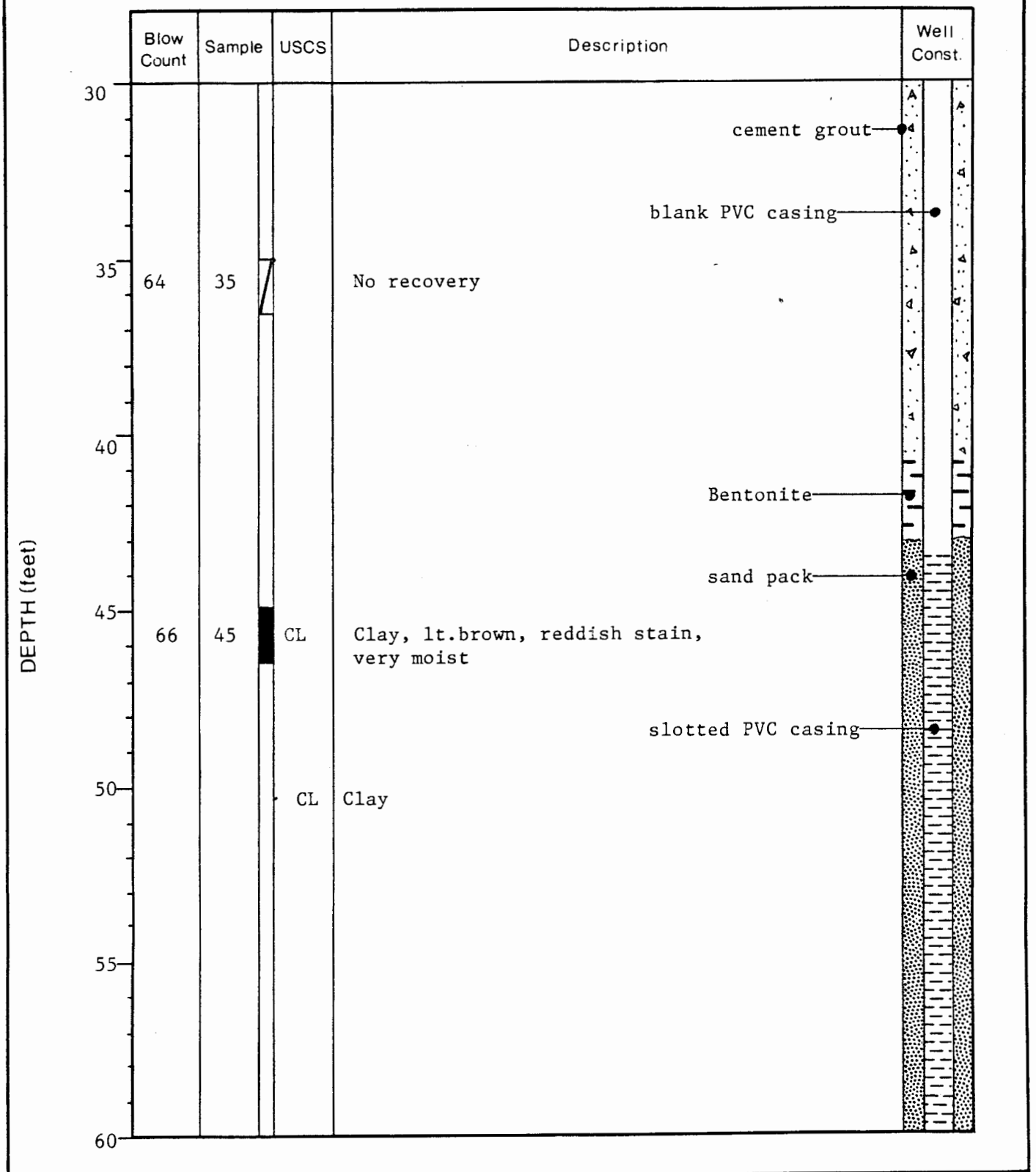
SANTA FE SPRINGS, CALIFORNIA

LOG of BORING **MW-9**

PROJECT NO. Q1014-2

PLATE

7



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So. Cal. Chemical

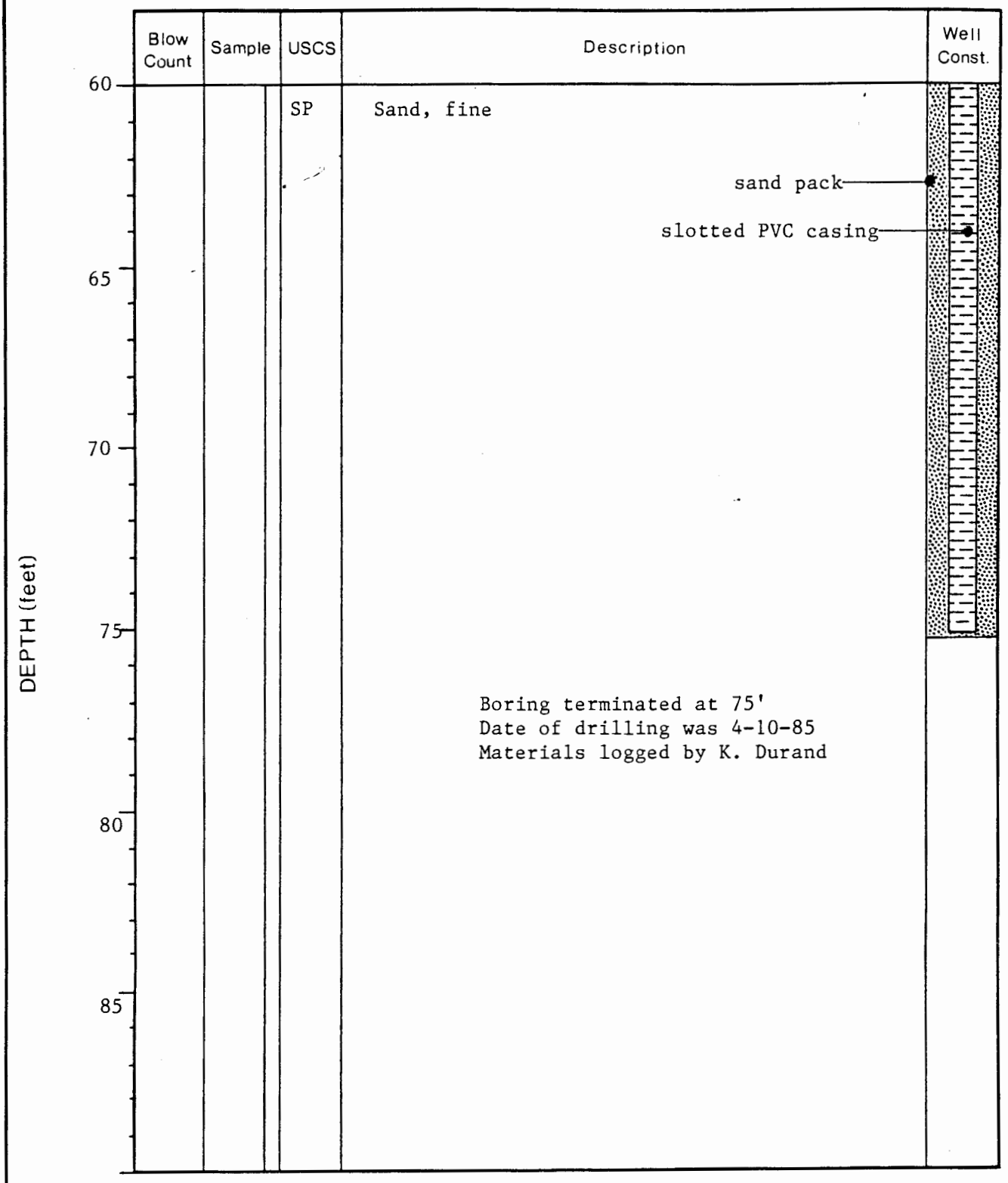
LOG of BORING MW-10

PLATE 8

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2



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PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

So. Cal. Chemical

LOG of BORING MW-10

PROJECT NO. Q1014-2

PLATE 8

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				4" concrete	
			SM	Silty sand, black, moist slant at 30	
5	9	5	ML	Silt, silt with fine sand, black medium, moist	
10	75	10	ML	Sandy silt, silt with fine sand brown, black-reddish, very stiff very moist	
15	52	15	SP	Sand, med. to fine sand brown, dense, damp	
20	20	99 +	SW	Sand, med to coarse, very little fines, tan, very dense, damp	
25					
30					

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So. Calif. Chemical

LOG of BORING B1

PLATE 9

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30	80	30	SP	Sand med.to coarse sand tan, very dense, damp , only 3" sample	
35					
40	78		ML	sandy silt, silt with fine sand drk.brn, very stiff, moist	
45					
50	82	50	CL	Clay,very stiff, brown-green, wet	
55				Boring terminated at 50 feet Date of drilling was 7-9-85 Material logged by K. Durand	
60					

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PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

So. Calif. Chemical

LOG of BORING B1

PROJECT NO. Q1014-2

PLATE 9

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				6" concrete	
			SP	Slant at 28° Sand, fine sand black, moist	
5	39	5	ML/CL	Silt/clay brown, very stiff, dry	
10	78	10	CL	clay, brown clay very stiff - hard, damp	
15	15	64	SP	Sand, med.sand, lt brown-tan very dense dry	
20	20	22	Sp	Sand, med. sand tan-red med. dense, dry	
25	25	76		no recovery	
30					

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So. Cal. Chemical

LOG of BORING B-2

PLATE 10

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30	99/3	30	SP	sand, med. to coarse sand lt.brown tan very dense dry	
			ML	Sandy silt, lt.brown-tan, very stiff moist	
35	68	10	ML	clayey silt, silt with clay, tan-reddish stiff damp	
40	96/4	40	CL	silty clay, very silty dark grey, moist	
				Boring Terminated at 40 feet Date of drilling was 7-9-85 Materials logged by K. Durand	
45					
50					
55					
60					

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PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

So. Calif. Chemical

LOG of BORING B-2

PROJECT NO. Q1014-2

PLATE 10

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				6" concrete	
			SM	Silty sand, fine sand & silt with pebbles up to 3/4", damp	
5	20	5	SM	Silty sand, fine sand and silt, med.dense damp, drk.brown	
10	41	10	SM	Silty sand, fine sand and silt dense, moist drk.brown	
15	52	15	SP	Sand, med. sand, tan,very dense,moist	
20				Boring terminated at 15'. Date of drilling was 7/8/85. Materials logged by K. Durand.	
25					
30					

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So. Calif. Chemical

LOG of BORING B-3

PLATE 11

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0			SP	6" concrete Sand, med. sand with pebbles up to 3/8" brown, dry	
5	33	5	ML	Silt with fine sand yellow stain, very stiff, dry	
10	54	10	ML	Silt with fine sand, yellow-brown, very stiff, dry-damp	
15	71+	15	ML	Silt with fine sand, brown, very stiff, damp	
20	100+	20	SP	Sand, med. to coarse sand with ½" rounded pebbles drk.brown-reddish very dense, damp	
25	97	25	SP	Sand coarse to med.sand tan-grey, very dense damp	
30					

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So. Cal. Chemical

LOG of BORING B-4

PLATE 12

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30	88	30	ML SP	Silt & Sand, brown very dense, damp Boring terminated at 30 feet Date of drilling was 7-9-85 Materials logged by K. Durand	

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GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

So. Cal. Chemical

LOG of BORING B-4

PROJECT NO. Q1014-2

PLATE 12

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0				6" concrete	
5	14	5	ML	Sandy silt: silt with fine sand, dark brown, med. stiff, moist	
10	20	10	ML	Sand silt, silt with fine sand and clay, brown-reddish, stiff, dry	
15	31	15	ML	Silt with clay, brown-reddish, stiff, damp	
20	91/4	20	SP	Med. to fine sand, grey-brown, very dense damp	
25	73	25	SW	gravelly sand, sand with pebbles up to 1½" dia. grey, hard, damp	
30					

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So. Cal. Chemical

LOG of BORING B5

PLATE 13

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30	91/5	30	SW	Sand- med. to coarse sand, grey very dense, moist/wet	
				Boring Terminated at 30 feet Date of drilling was 7-12-85 Materials logged by K. Durand	

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PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

So. Cal. Chemical

LOG of BORING B5

PROJECT NO. Q1014-2

PLATE 13

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
30	57		ML	Sandy silt, silt with coarse sand very stiff moist, wet	
				Boring terminated at 30 feet Date of drilling was 7-9-85 Materials logged by K. Durand	

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GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

So. Cal. Chemical

LOG of BORING B-6

PROJECT NO. 01014-2

PLATE 14

DEPTH (feet)	Blow Count	Sample	USCS	Description	Well Const.
0					
5	14	5	ML CL	Silt/clay, yellow, soft, moist	
10	40	10		No recovery	
15	41	15	SP	Sand, fine sand with silt, brown reddish, very dense, dry	
20	70	20	SP	Sand, med. to coarse sand red-brown very dense moist, very little fine	
25	93+	25	GP SW	Sandy gravel, gravely sand, rounded pebbles up to ½", very dense, damp	
30					

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GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

So. Cal. Chemical

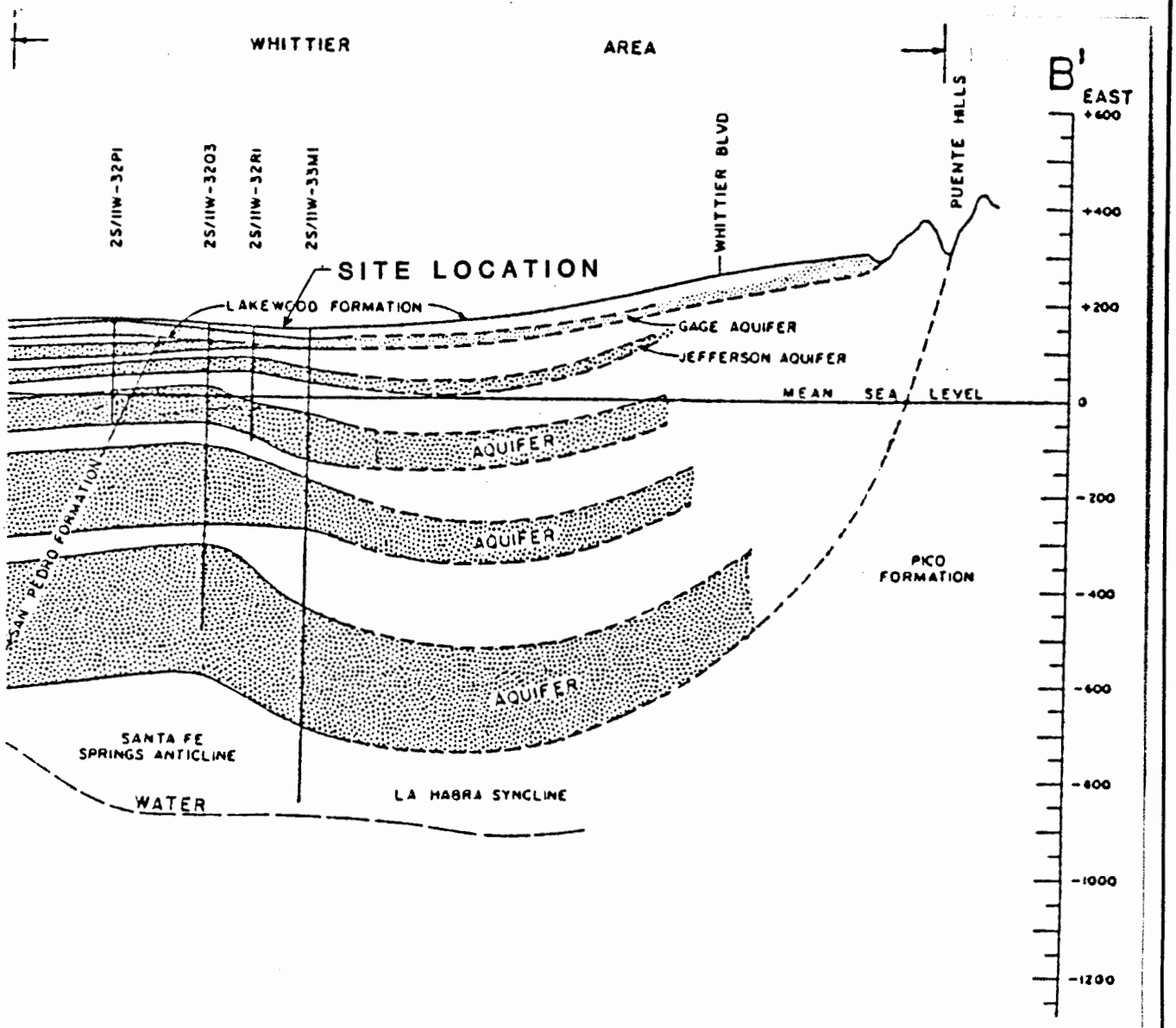
LOG of BORING B-6

PLATE 14

PREPARED BY: GH DATE: 7-85

CHECKED BY: DATE:

PROJECT NO. Q1014-2

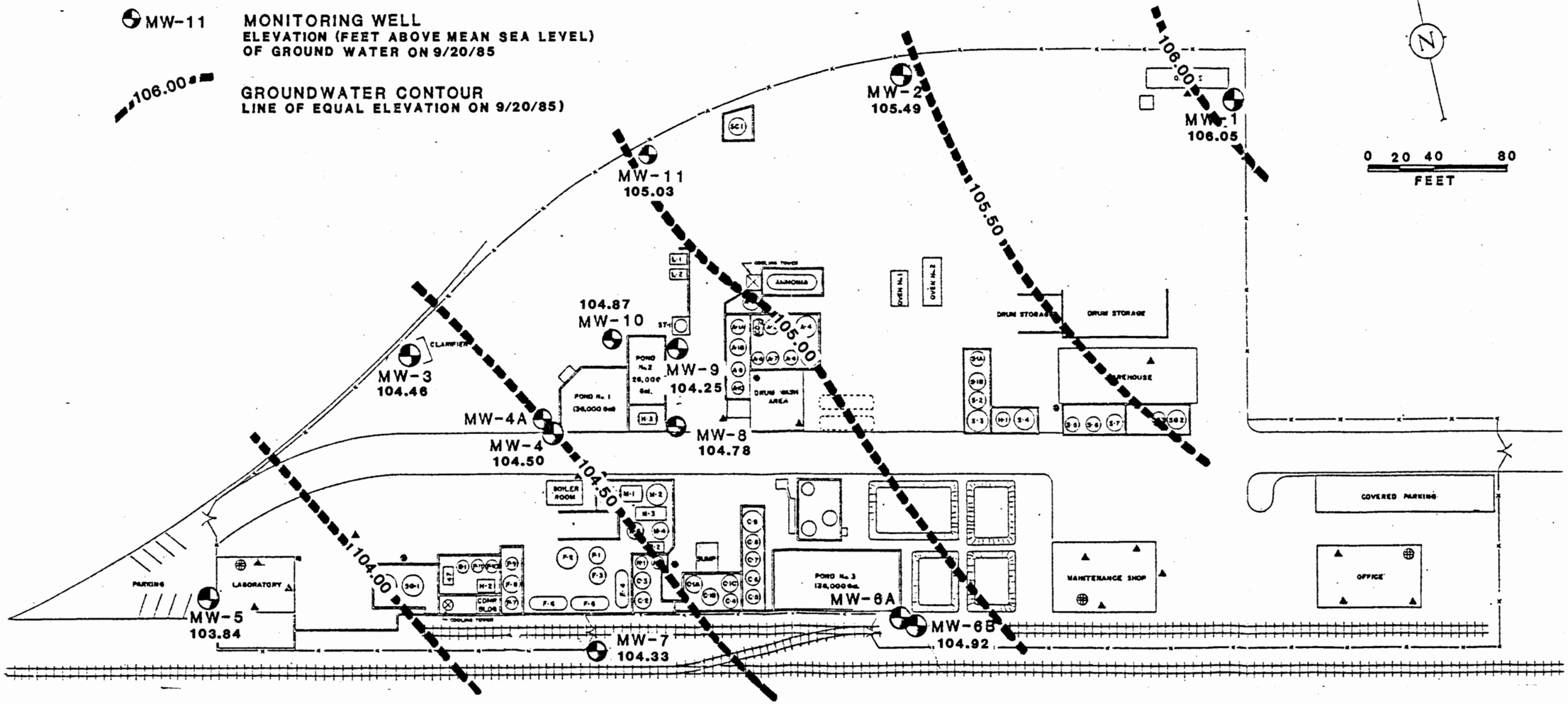


J.H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS • MATERIALS TESTING	SOUTHERN CALIFORNIA CHEMICAL COMPANY REGIONAL CROSS SECTION	PLATE 15
PREPARED BY: DATE:		
CHECKED BY: DATE:	PROJECT NO.	

EXPLANATION

MW-11 — MONITORING WELL
ELEVATION (FEET ABOVE MEAN SEA LEVEL) OF GROUND WATER ON 9/20/85

106.00 — GROUNDWATER CONTOUR
LINE OF EQUAL ELEVATION ON 9/20/85)



J.H. KLEINFELDER & ASSOCIATES GEOTECHNICAL CONSULTANTS • MATERIALS TESTING PROJECT NO. Q 1014-2	SOUTHERN CALIFORNIA CHEMICAL SANTA FE SPRINGS, CA. **GROUNDWATER ELEVATION CONTOUR MAP SEPTEMBER 20, 1985**	PLATE **16**

Metal[illegible]h as [illegible]e, Sn[illegible] Ni, Ti, Cu, Cr, As, etc.

Reactions, Quantities, Frequencies of Chemicals in SCC's Wastewater Neutralization System

Quantity	SCC Materials (Prior to Pretreatment as Required by EPA & LACSD)	pH 13-14 Solution in Tank Prior to Treatment	Neutralization*	Metals Precipitation (By Addition of Reducing Agent such as Sodium Sulfide)	Solution After Precipitation	Oxidation if Needed	Effluent Discharged to LACSD 22,000-27,000 gpd pH above 6
14. 0- (Inadvertent)	Cupric oxide	$CuO \rightarrow$	$\rightarrow$	$CuO\downarrow$			
15.	Cupric sulfate solution	$CuSO_4 \rightarrow$	$\rightarrow$	$+ Na_2S \rightarrow CuS\downarrow$	$+ (NH_4)_2SO_4$ &/or $Na_2SO_4 \rightarrow$	$\rightarrow$	$\rightarrow$
16.	Cupric chloride solution	$CuCl_2 \rightarrow$	$\rightarrow$	$+ Na_2S \rightarrow CuS\downarrow$	$+ NH_4Cl$ &/or $NaCl \rightarrow$	$\rightarrow$	$\rightarrow$
17.	Copper pyrophosphate solution	$Cu_2P_2O_7 \rightarrow$	$\rightarrow$	$+ Na_2S \rightarrow 2CuS\downarrow$	$+ (NH_4)_2HPO_4$ &/or $Na_2HPO_4 \rightarrow$	$\rightarrow$	$\rightarrow$
18.	Cupric nitrate solution	$Cu(NO_3)_2 \rightarrow$	$\rightarrow$	$+ Na_2S \rightarrow CuS\downarrow$	$+ NaNO_3$ &/or $NH_4NO_3 \rightarrow$	$\rightarrow$	$\rightarrow$
19.	Copper hydroxide solution	$Cu(OH)_2 \rightarrow$	$\rightarrow$	$Cu(OH)_2\downarrow$			
20.	Cuprous chloride solution	$CuCl \rightarrow$	$\rightarrow$	$+ Na_2S \rightarrow CuS\downarrow$	$+ NH_4Cl$ &/or $NaCl \rightarrow$	$\rightarrow$	$\rightarrow$
21. 0-100 gpd	(Materials resulting from roadway washdown; routine plant cleanup (incl. dirt); truck washing; container & tank cleaning; drum triple rinsing; cleanup of spills; rinse waters	Dirt (w/ or w/o M) $\rightarrow$	$\rightarrow$	Dirt$\downarrow$ CuS$\downarrow$ NiS$\downarrow$ PbS$\downarrow$ SnS$\downarrow$	$+ H_2O \rightarrow$	$\rightarrow$	$\rightarrow$
A. 50-100 gpd, or as needed	Hydrogen peroxide				If any free sulfides	$+ H_2O_2 \rightarrow$	Sulfates
B. As needed	Chlorine (to kill free sulfides as needed)	Cl_2			If any free sulfides	$+ Cl_2 \rightarrow$	NaOCl
C. 0-50 gpd	Perchloric acid				If any free sulfides	$+ HClO_4 \rightarrow$	$NaCl + O_2\uparrow$
	**20% chromic-sulfuric acid soln in water, pH 0-1 (mixed with hi pH precipitate once every 30-60 [<90] days; otherwise, stored in separate above-ground tank).	$\rightarrow$	$\rightarrow$	Builtup Precipitates in Bottom of Tanks: 3.5% CuS; 3% NaCl; 2.5% Cr^+S; 3% metal hydroxide; 2% metal sulfide; 2.7% FeS; 0.3% ZnS; 0.5% other; 1% $(NH_4)_2SO_4$; 81% water.	$\rightarrow$ Hauled away to appropriate site or sold.		

*May add any of the neutralizing acids listed in this column, alone or in combinations; may contain metals.

**Prior to 1983, this material did not enter wastewater system at all. It was taken directly from tank straight to Class I site.

PLATE 17

M = Metals, such as Pb, Fe, Sn, Zn, Ni, Ti, Cu, Cr, As, etc.

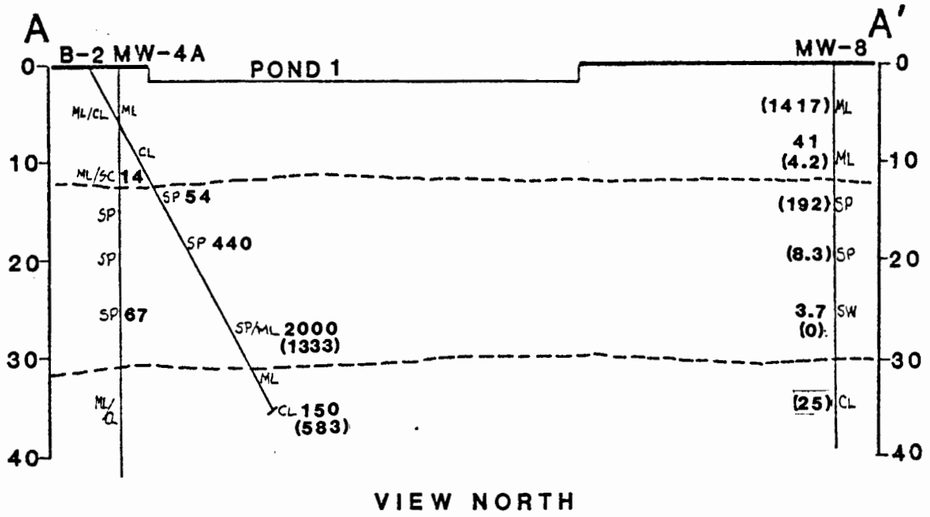
Reactions, quantities, frequencies of Chemicals in SCC's Wastewater Neutralization System

Quantity	SCC Materials (Prior to Pretreatment as Required by EPA & LACSD)	pH 13-14 Solution in Tank Prior to Treatment	Neutralization*	Metals Precipitation (By Addition of Reducing Agent such as Sodium Sulfide)	Solution After Precipitation	Oxidation if Needed	Effluent Discharged to LACSD 22,000-27,000 gpd pH above 6
1.0-1000 gpd	(Ferric chloride solution, $FeCl_3$ (may contain metals such as Ni, Zn, Cr, Pb, Sn, As, etc., e.g.)	~8% FeOH + NaCl (as result of exposure to hi pH media)	→	+ Na_2S → FeOH↓, PbS↓, NiS↓, SnS↓, Cr_2S_3↓, ZnS↓, AsS↓	+ NaCl →	→	→
2.	(Ferrous chloride solution, $FeCl_2$ (same as above)						
3.15-20000 gpd	(10% sodium chloride solution	NaCl →	→	→	→	→	→
4.	(1-2% sodium hydroxide solution	NaOH →	+ H_2SO_4 (w/ or w/o M)	+ Na_2S → PbS↓, AsS↓, FeS↓	+ $(NH_4)_2SO_4$ &/or Na_2SO_4 →	→	→
5.	(Residual sodium carbonate	$NaCO_3$ →	+ HCl (w/ or w/o M)	+ Na_2S → TiS↓, FeS↓, SnS↓	+ NH_4Cl &/or NaCl →	→	→
6.	(Ammonium hydroxide	NH_4OH →	+ H_3PO_4 (w/ or w/o M)	+ Na_2S → MS↓	+ $(NH_4)_2HPO_4$ &/or Na_2HPO_4 →	→	→
7.	(<1% free ammonium chloride soln	NH_4Cl →	+ HNO_3 (w/ or w/o M)	+ Na_2S → MS↓	+ NH_4NO_3 &/or $NaNO_3$ →	→	→
8.	(<1% free ammonia + other water	$NH_3 + H_2O$	Citric acid (w/ or w/o M)	+ Na_2S → MS↓	+ Ammonium citrate &/or sodium citrate →	→	→
9.	(Cupric ammonium chloride solution	$Cu \cdot 2(NH_3) \cdot 2(NH_4)Cl_2$ →	→	+ Na_2S → CuS↓	+ $2NH_4OH + 2NH_4Cl$ →	→	→
10.0-20000 g/mo.	1-2% ammonium sulfate solution**	$(NH_4)_2SO_4$ →	→	→	→	→	→
11.0-200 gpd	Ammonium bifluoride soln, NH_4HF_2 pH 3; w/Sn, Pb, Cu, etc.	NH_4F → (as result of exposure to hi pH media)	→	+ Na_2S → SnS↓, PbS↓, CuS↓	+ NH_4F →	→	$2NH_4F$
12.0-100 gpd	Nickel sulfate solution	$NiSO_4$ →	→	+ Na_2S → NiS↓ →	+ $(NH_4)_2SO_4$ &/or Na_2SO_4 →	→	→
13.0-100 gpd	Zinc sulfate solution	$ZnSO_4$ →	→	+ Na_2S → ZnS↓ →	+ $(NH_4)_2SO_4$ &/or Na_2SO_4 →	→	→

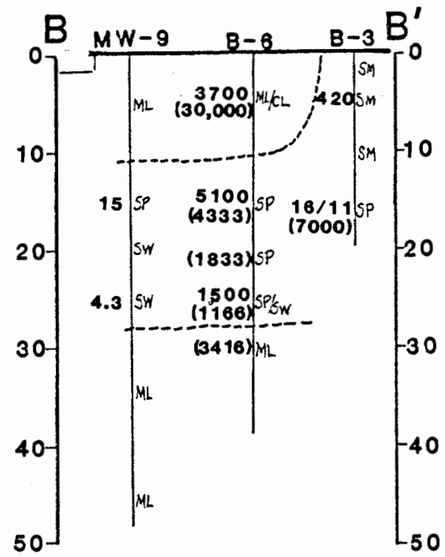
*May add any of the neutralizing acids listed in this column, alone or in combinations; may contain metals.

**Normally sold rather than discharged.

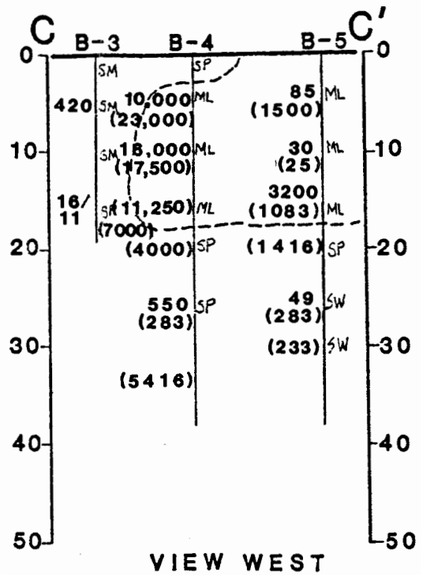
PLATE 17



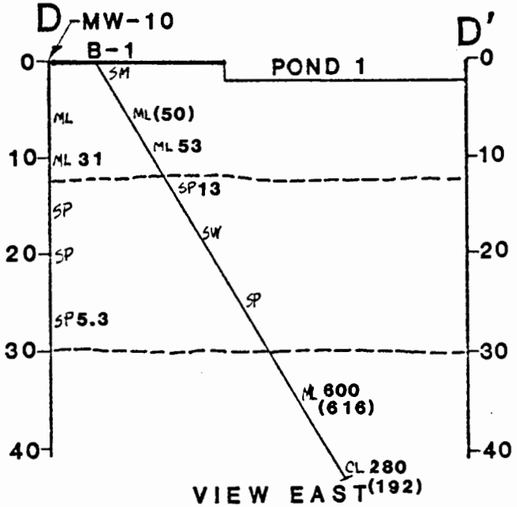
VIEW NORTH



VIEW NORTH



VIEW WEST



VIEW EAST

SCALE: 1''=16'

10,000 SAMPLE ANALYZED AT LABORATORY OF BROWN & CALDWELL

(23,000) SAMPLE ANALYZED AT LABORATORY OF SOUTHERN CALIFORNIA CHEMICAL

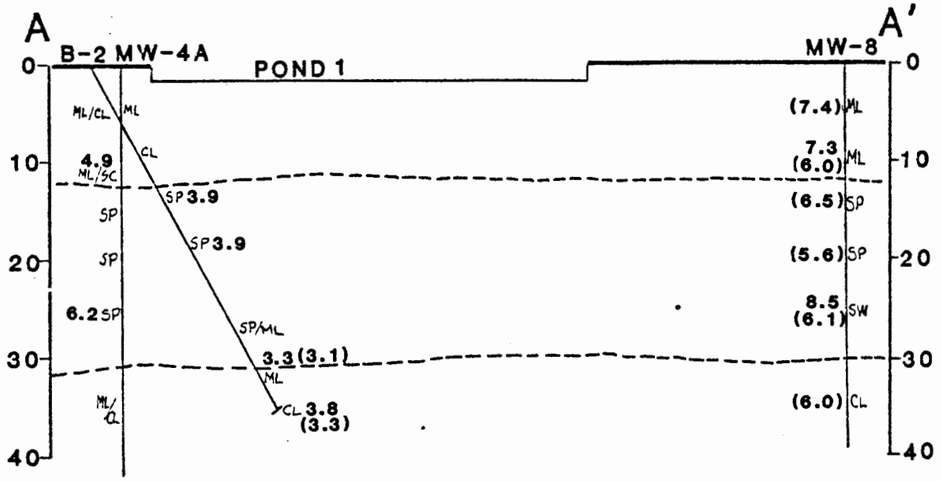
J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. Q1014-2

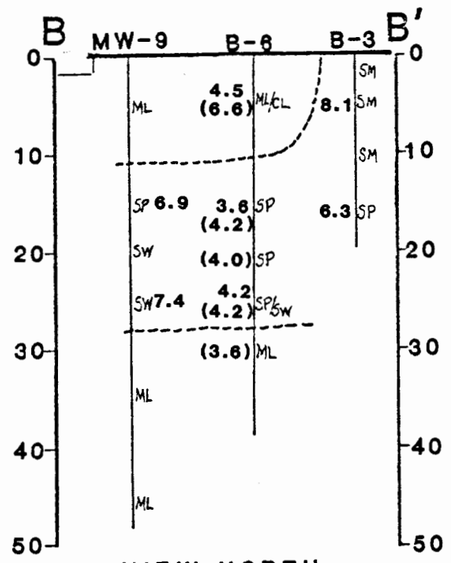
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CA.

CROSS SECTIONS WITH CONCENTRATIONS OF CHROMIUM IN SOIL (MG/KG)

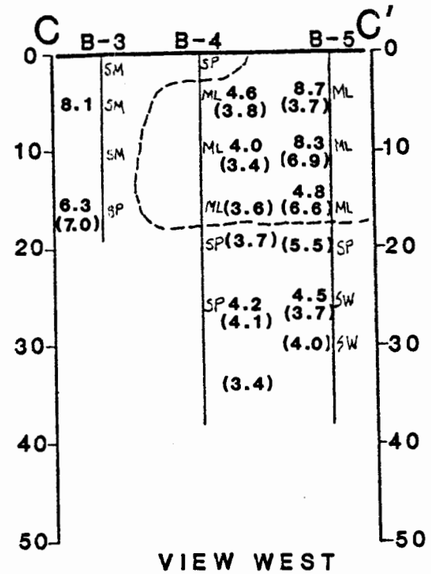
PLATE 18



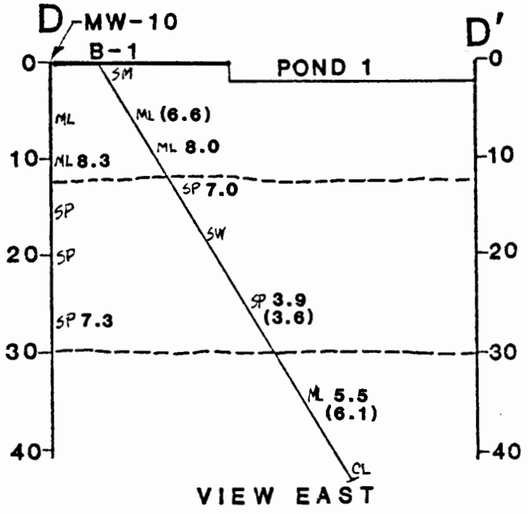
VIEW NORTH



VIEW NORTH



VIEW WEST



VIEW EAST

SCALE: 1''= 16'

4.5 SAMPLE ANALYZED AT LABORATORY OF BROWN & CALDWELL

(4.2) SAMPLE ANALYZED AT LABORATORY OF SOUTHERN CALIFORNIA CHEMICAL

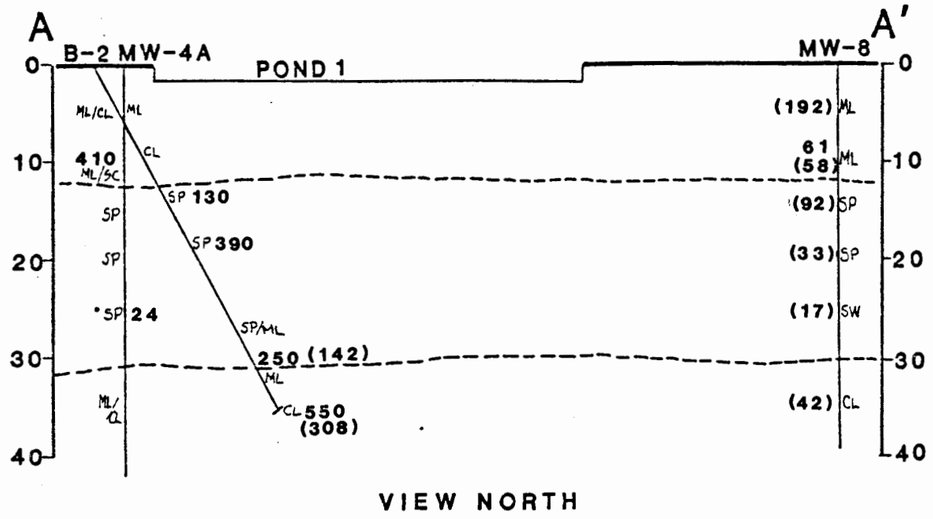
J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. Q1014-2

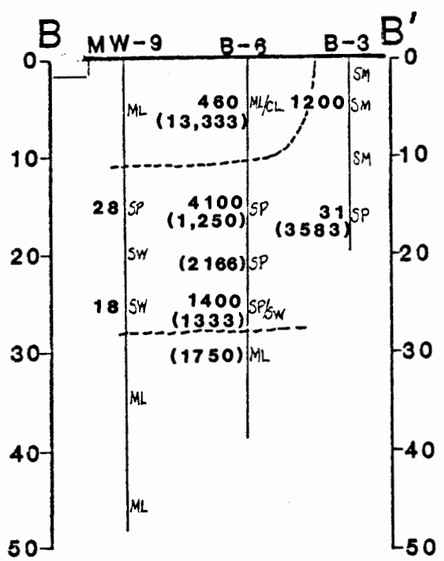
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CA.

CROSS SECTIONS WITH CONCENTRATIONS OF OF PH IN SOIL

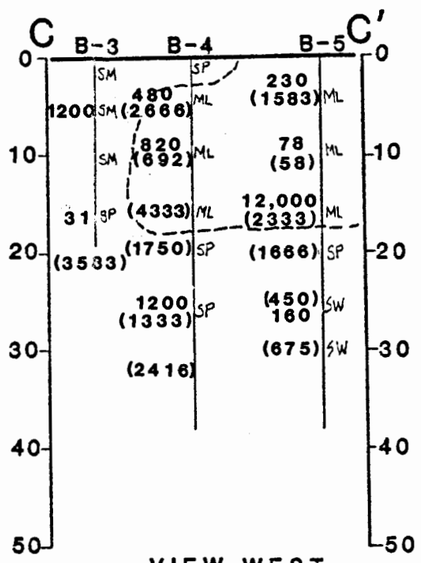
PLATE 19



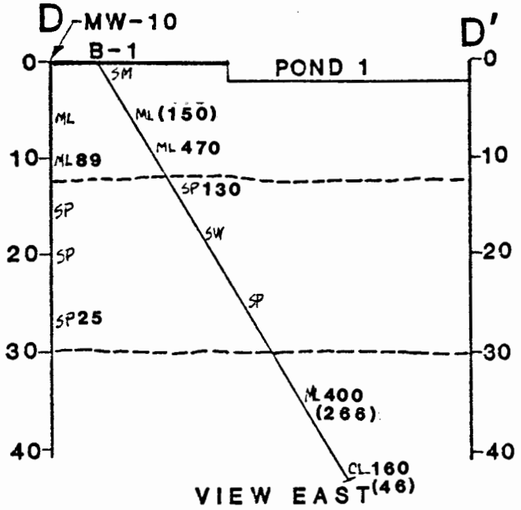
VIEW NORTH



VIEW NORTH



VIEW WEST



VIEW EAST

SCALE: 1'' = 16'

450 SAMPLE ANALYZED AT LABORATORY OF BROWN & CALDWELL

(17) SAMPLE ANALYZED AT LABORATORY OF SOUTHERN CALIFORNIA CHEMICAL

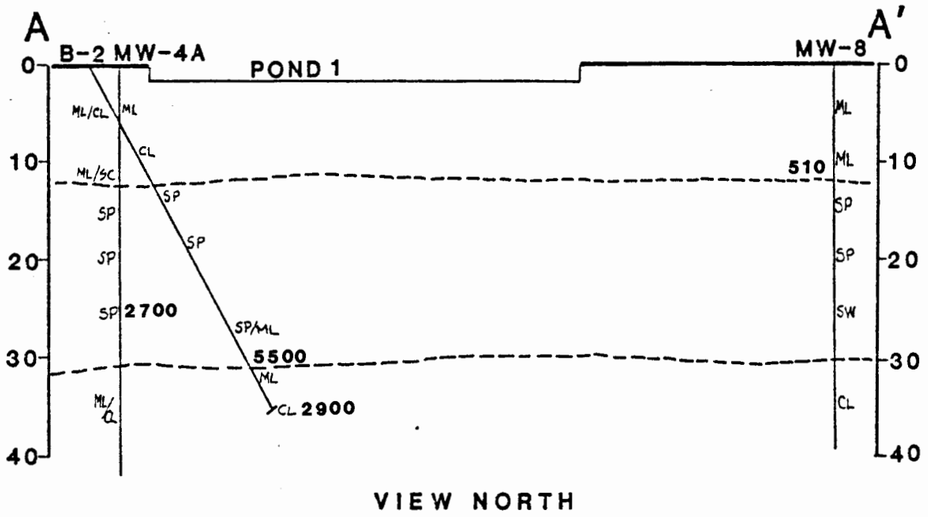
J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. Q1014-2

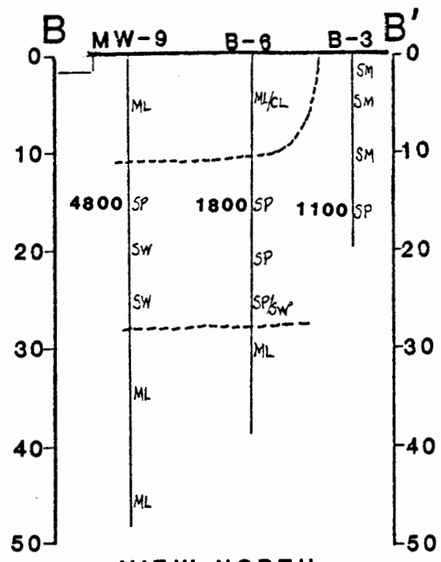
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CA.

CROSS SECTIONS WITH CONCENTRATIONS OF COPPER IN SOIL (MG/KG)

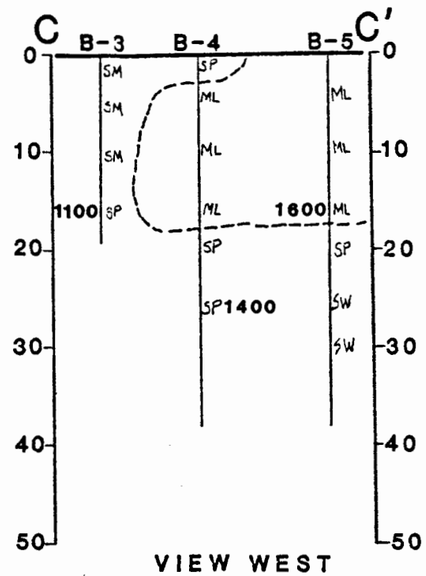
PLATE 20



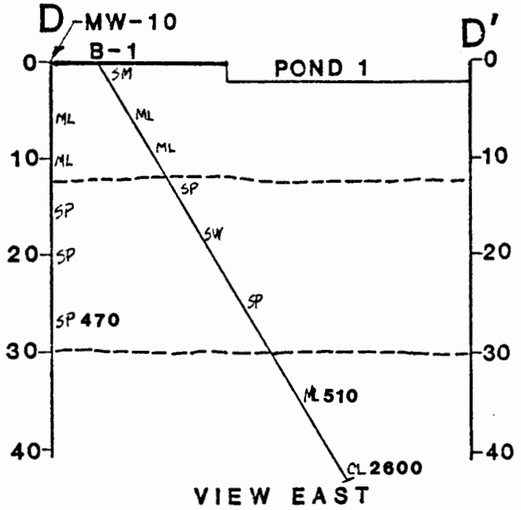
VIEW NORTH



VIEW NORTH



VIEW WEST



VIEW EAST

SCALE: 1'' = 16'

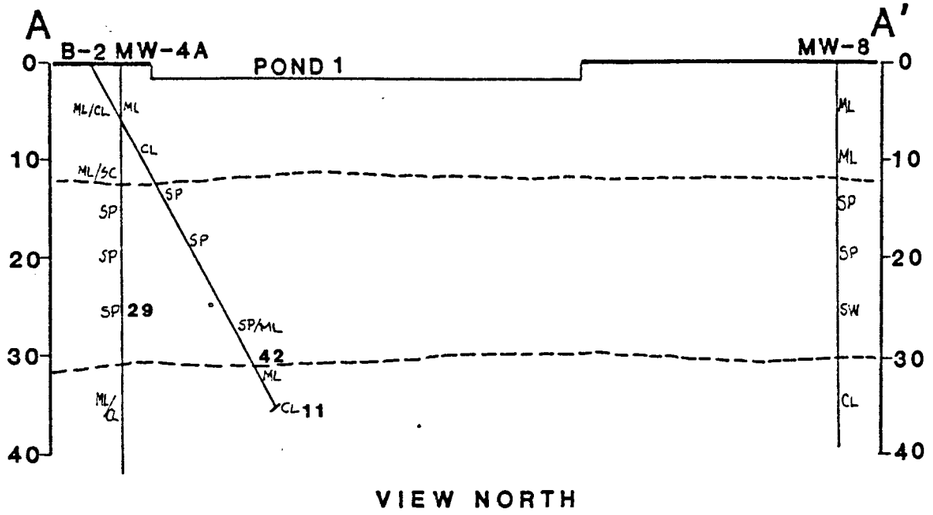
J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. Q1014-2

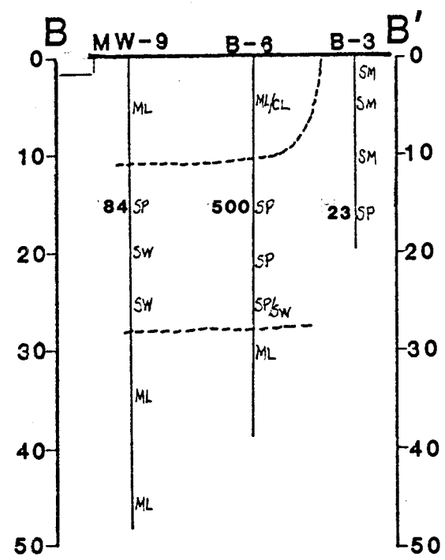
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CA.

CROSS SECTIONS WITH CONCENTRATIONS OF CHLORIDE IN SOIL (MG/KG)

PLATE 21



VIEW NORTH



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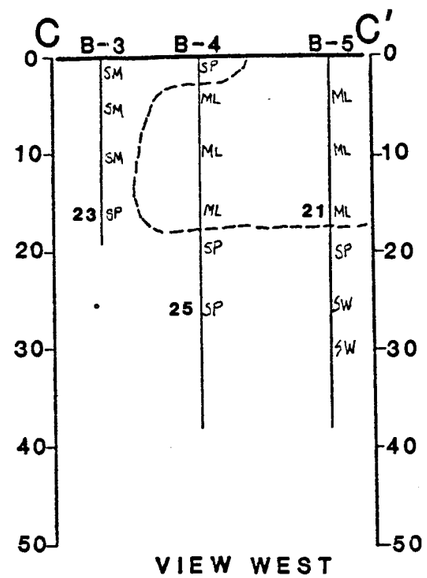

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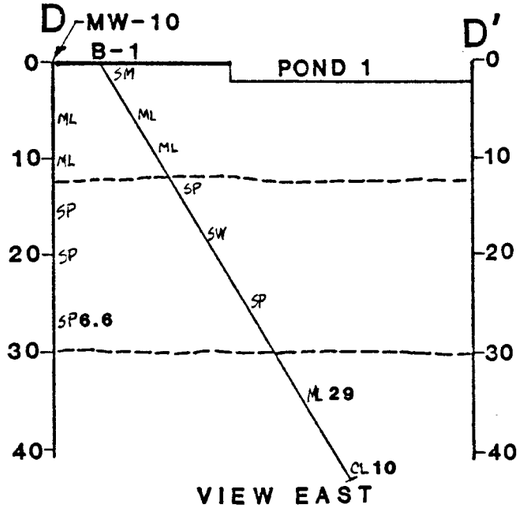


VIEW EAST

SCALE: 1'' = 16'

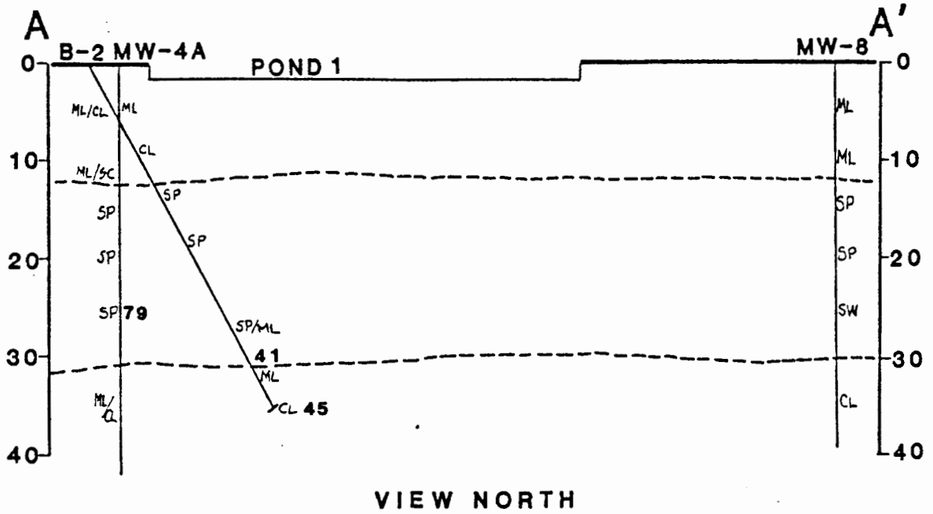
J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. Q1014-2

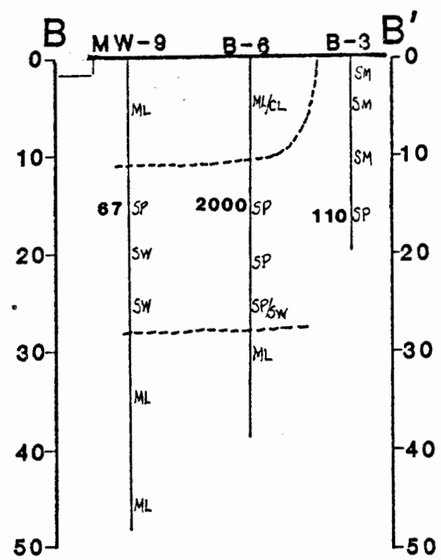
SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CA.

CROSS SECTIONS
WITH CONCENTRATIONS OF
NITROGEN IN SOIL (MG/KG)

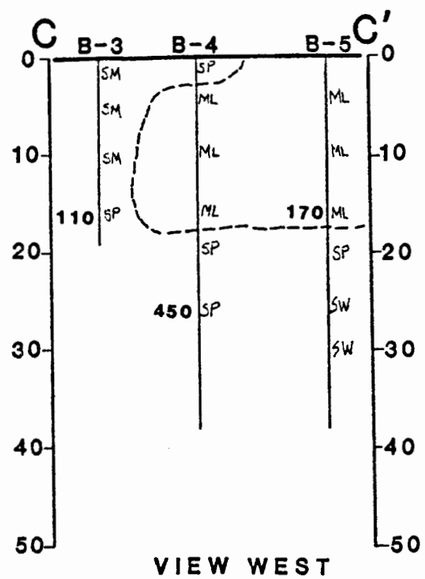
PLATE
22



VIEW NORTH



VIEW NORTH



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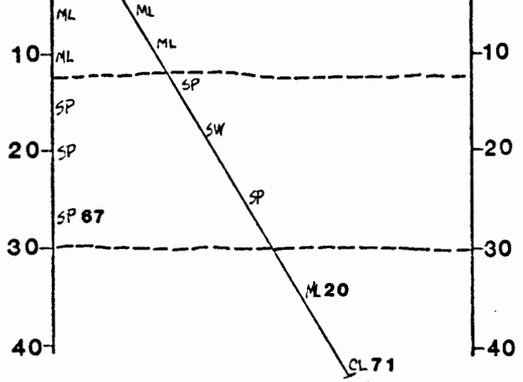

VIEW EAST

SCALE: 1'' = 16'

J.H. KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. Q1014-2

SOUTHERN CALIFORNIA CHEMICAL
SANTA FE SPRINGS, CA.

CROSS SECTIONS WITH CONCENTRATIONS OF SULFATE IN SOIL (MG/KG)

PLATE 23

APPENDIX A

BROWN AND CALDWELL
ANALYTICAL LABORATORIES

LOG NO: P85-07-363

Received: 24 JUL 85
Reported: 19 AUG 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
07-363-1	W-00-137/W-00-138 Q-1014-2	24 JUL 85
07-363-2	W-02-140 Q-1014-2	24 JUL 85
07-363-3	W-05-144/W-05-145 Q-1014-2	24 JUL 85
07-363-4	W-04-146/W-04-147 Q-1014-2	24 JUL 85
07-363-5	W-00-149/W-00-150 Q-1014-2	24 JUL 85
07-363-6	W-03-152/W-03-153 Q-1014-2	24 JUL 85

PARAMETER	07-363-1	07-363-2	07-363-3	07-363-4	07-363-5	07-363-6
Purgeable Priority Pollutants						
Extraction	08/07/85	08/07/85	08/07/85	08/07/85	08/07/85	08/07/85
1,1-Dichloroethane, ug/L	<1	4	<1	100	<1	6
1,1-Dichloroethylene, ug/L	<1	3	<1	100	<1	14
Acrolein, ug/L	<10	<10	<10	<500	<10	<10
Acrylonitrile, ug/L	<10	<10	<10	<500	<10	<10
Benzene, ug/L	16	<1	5	<50	14	9
Carbon Tetrachloride, ug/L	<1	<1	3	<50	<1	73
Chloroform, ug/L	<1	<1	2	<50	<1	46
Ethylbenzene, ug/L	<1	<1	<1	3000	<1	<1
Methylene Chloride, ug/L	<1	<1	<1	100	16	<1
Trichloroethylene, ug/L	<1	21	10	550	<1	320
Toluene, ug/L	14	<1	1	8300	13	2
trans-1,2-Dichloroethylene, ug/L	<1	9	<1	<50	<1	1
Other Purgeable Priority Pollutants,	<1	<1	<1	<50	<1	<1

A-1

LOG NO: P85-07-363

Received: 24 JUL 85
Reported: 19 AUG 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
07-363-1	W-00-137/W-00-138 Q-1014-2	24 JUL 85
07-363-2	W-02-140 Q-1014-2	24 JUL 85
07-363-3	W-05-144/W-05-145 Q-1014-2	24 JUL 85
07-363-4	W-04-146/W-04-147 Q-1014-2	24 JUL 85
07-363-5	W-00-149/W-00-150 Q-1014-2	24 JUL 85
07-363-6	W-03-152/W-03-153 Q-1014-2	24 JUL 85

PARAMETER	07-363-1	07-363-2	07-363-3	07-363-4	07-363-5	07-363-6
Semi-Quantified Results **						
Xylene Isomers, ug/L	---	---	---	10,000	---	---

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

A-2

LOG NO: P85-07-363

Received: 24 JUL 85
Reported: 19 AUG 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
07-363-7	W-02-142 Q-1014-2	24 JUL 85

PARAMETER	07-363-7
Chromium, mg/L	<0.033
Dissolved Digestion, Date	07/25/85
Hexavalent Chromium, mg/L	<0.033

A-3

LOG NO: P85-07-363

Received: 24 JUL 85
Reported: 19 AUG 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
)7-363-8	W-04-148 Q-1014-2	24 JUL 85

PARAMETER	07-363-8
Chromium, mg/L	550
Cadmium, mg/L	0.92
Dissolved Digestion, Date	07/25/85
Hexavalent Chromium, mg/L	500
Nitrate Nitrogen	
Nitrate (as NO3), mg/L	55
Nitrate (as N), mg/L	12

A-4

LOG NO: P85-07-363

Received: 24 JUL 85
Reported: 19 AUG 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
7-363-9	W-03-154 Q-1014-2	24 JUL 85

PARAMETER	07-363-9
Cadmium, mg/L	<0.011
Chromium, mg/L	<0.033
Dissolved Digestion, Date	07/25/85
Hexavalent Chromium, mg/L	<0.033

Edward Wilson, Laboratory Director

A-5

BROWN AND CALDWELL

ANALYTICAL LABORATORIES

RECEIVED
SEP 06 1985
JHK & A LA

LOG NO: P85-08-042

Received: 02 AUG 85
Reported: 03 SEP 85

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LAB NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-042-1	W-00-155thru158 Q-1014-2	02 AUG 85

PARAMETER	08-042-1
Quadruplicate TOC:	
TOC, Average, mg/L	<3.0
TOC, Standard Deviation, mg/L	0.0
TOC, 1st Replicate, mg/L	<3.0
TOC, 2nd Replicate, mg/L	<3.0
TOC, 3rd Replicate, mg/L	<3.0
TOC, 4th Replicate, mg/L	<3.0

A-6

LOG NO: P85-08-042

Received: 02 AUG 85
Reported: 03 SEP 85

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-042-2	W-07-159thru173 Q-1014-2	02 AUG 85
08-042-3	W-09-189thru203 Q-1014-2	02 AUG 85
08-042-4	W-11-174thru188 Q-1014-2	02 AUG 85

PARAMETER	08-042-2	08-042-3	08-042-4	
Cadmium, mg/L	<0.01	<0.01	<0.01	
Chromium, mg/L	<0.03	<0.03	<0.03	
Dissolved Digestion, Date	08/06/85	08/06/85	08/06/85	
Chloride, mg/L	380	300	220	
Hexavalent Chromium, mg/L	<0.5	<0.5	<0.5	
Nitrate Nitrogen				
Nitrate (as NO3), mg/L	120	6.3	5.2	
Nitrate (as N), mg/L	27	1.4	1.2	
Quadruplicate Conductivity:				
Sp. Cond., Average, umhos/cm	2700	2200	1600	
Sp. Cond., Std. Deviation, umhos/cm	43	0	43	
Sp. Cond., 1st Replicate, umhos/cm	2700	2200	1600	
Sp. Cond., 2nd Replicate, umhos/cm	2700	2200	1700	
Sp. Cond., 3rd Replicate, umhos/cm	2800	2200	1600	
Sp. Cond., 4th Replicate, umhos/cm	2700	2200	1600	

A-7

LOG NO: P85-08-042

Received: 02 AUG 85
Reported: 03 SEP 85

Ken Durand
J. H. Kleinfelder & Associates
901 W. Victoria Street, Suite G
Compton, California 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-042-2	W-07-159thru173 Q-1014-2	02 AUG 85
08-042-3	W-09-189thru203 Q-1014-2	02 AUG 85
08-042-4	W-11-174thru188 Q-1014-2	02 AUG 85

PARAMETER	08-042-2	08-042-3	08-042-4	
Quadruplicate pH:				
pH, Average, Units	6.3	6.4	6.6	
pH, Standard Deviation, Units	0.04	0.0	0.04	
pH, 1st Replicate, Units	6.4	6.4	6.6	
pH, 2nd Replicate, Units	6.3	6.4	6.7	
pH, 3rd Replicate, Units	6.3	6.4	6.6	
pH, 4th Replicate, Units	6.3	6.4	6.6	
Quadruplicate TOC:				
TOC, Average, mg/L	260	210	54	
TOC, Standard Deviation, mg/L	21	0.0	1.7	
TOC, 1st Replicate, mg/L	270	210	56	
TOC, 2nd Replicate, mg/L	280	210	52	
TOC, 3rd Replicate, mg/L	240	210	53	
TOC, 4th Replicate, mg/L	240	210	54	

A-8

LOG NO: P85-08-042

Received: 02 AUG 85
Reported: 03 SEP 85

Ken Durand
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Compton, California 90220

Project: Q-1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-042-2	W-07-159thru173 Q-1014-2	02 AUG 85
08-042-3	W-09-189thru203 Q-1014-2	02 AUG 85
08-042-4	W-11-174thru188 Q-1014-2	02 AUG 85

PARAMETER	08-042-2	08-042-3	08-042-4		
Quadruplicate TOX:					
TOX, 1st Replicate, mg/L	0.069	0.11	<0.05		
TOX, 2nd Replicate, mg/L	0.10	0.12	<0.05		
TOX, 3rd Replicate, mg/L	0.091	0.13	<0.05		
TOX, 4th Replicate, mg/L	0.063	0.15	0.098		
TOX, Average, mg/L	0.081	0.13	0.062		
TOX, Standard Deviation, mg/L	0.018	0.017	0.024		

Edward Wilson, Laboratory Director

A-10

BROWN AND CALDWELL
ANALYTICAL LABORATORIES

LOG NO: P85-08-064

Received: 05 AUG 85
Reported: 03 SEP 85

Ken Durand
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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-064-1	W-00-204thru218 Q1014-2	05 AUG 85
08-064-2	W-00-264thru278 Q1014-2	05 AUG 85
08-064-3	W-4A-249thru263 Q1014-2	05 AUG 85
08-064-4	W-08-234thru248 Q1014-2	05 AUG 85

PARAMETER	08-064-1	08-064-2	08-064-3	08-064-4
Cadmium, mg/L	<0.01	<0.01	<0.01	<0.01
Chromium, mg/L	<0.03	<0.03	<0.03	<0.03
Dissolved Digestion, Date	08/06/85	08/06/85	08/06/85	08/06/85
Hexavalent Chromium, mg/L	<0.5	<0.5	<0.5	<0.5
Nitrate Nitrogen				
Nitrate (as NO3), mg/L	9.3	0.10	20	5.8
Nitrate (as N), mg/L	2.1	0.44	4.5	1.3
Quadruplicate pH:				
pH, Average, Units	5.6	4.2	6.8	6.6
pH, Standard Deviation, Units	0.0	0.0	0.05	0.04
pH, 1st Replicate, Units	5.6	4.2	6.8	6.6
pH, 2nd Replicate, Units	5.6	4.2	6.8	6.6
pH, 3rd Replicate, Units	5.6	4.2	6.7	6.7
pH, 4th Replicate, Units	5.6	4.2	6.8	6.6

A-11

LOG NO: P85-08-064

Received: 05 AUG 85
Reported: 03 SEP 85

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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-064-1	W-00-204thru218 Q1014-2	05 AUG 85
08-064-2	W-00-264thru278 Q1014-2	05 AUG 85
08-064-3	W-4A-249thru263 Q1014-2	05 AUG 85
08-064-4	W-08-234thru248 Q1014-2	05 AUG 85

PARAMETER	08-064-1	08-064-2	08-064-3	08-064-4
Quadruplicate Conductivity:				
Sp. Cond., Average, umhos/cm	52	190	1500	2800
Sp. Cond., Std. Deviation, umhos/cm	0	5	47	43
Sp. Cond., 1st Replicate, umhos/cm	52	190	1500	2800
Sp. Cond., 2nd Replicate, umhos/cm	52	180	1500	2800
Sp. Cond., 3rd Replicate, umhos/cm	52	180	1400	2800
Sp. Cond., 4th Replicate, umhos/cm	52	190	1500	2700
Quadruplicate TOC:				
TOC, Average, mg/L	<3	<3	40	99
TOC, Standard Deviation, mg/L	0	0	3.8	3.5
TOC, 1st Replicate, mg/L	<3	<3	38	99
TOC, 2nd Replicate, mg/L	<3	<3	37	96
TOC, 3rd Replicate, mg/L	<3	<3	46	103
TOC, 4th Replicate, mg/L	<3	<3	40	99

A-12

LOG NO: P85-08-064

Received: 05 AUG 85
Reported: 03 SEP 85

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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-064-1	W-00-204thru218 Q1014-2	05 AUG 85
08-064-2	W-00-264thru278 Q1014-2	05 AUG 85
8-064-3	W-4A-249thru263 Q1014-2	05 AUG 85
8-064-4	W-08-234thru248 Q1014-2	05 AUG 85

PARAMETER	08-064-1	08-064-2	08-064-3	08-064-4
Quadruplicate TOX:				
TOX, 1st Replicate, mg/L	<0.05	<0.05	<0.05	0.53
TOX, 2nd Replicate, mg/L	<0.05	0.052	<0.05	0.16
TOX, 3rd Replicate, mg/L	<0.05	<0.05	<0.05	0.27
TOX, 4th Replicate, mg/L	<0.05	<0.05	<0.05	0.79
TOX, Average, mg/L	<0.05	0.051	<0.05	0.44
TOX, Standard Deviation, mg/L	0.0	0.001	0.0	0.28

A-13

LOG NO: P85-08-064

Received: 05 AUG 85
Reported: 03 SEP 85

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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-064-5	W-10-219thru233 Q1014-2	05 AUG 85

PARAMETER	08-064-5
Cadmium, mg/L	<0.01
Chromium, mg/L	<0.03
Dissolved Digestion, Date	08/06/85
Hexavalent Chromium, mg/L	<0.5
Nitrate Nitrogen	
Nitrate (as NO3), mg/L	<0.44
Nitrate (as N), mg/L	<0.10
Quadruplicate pH:	
pH, Average, Units	6.8
pH, Standard Deviation, Units	0.04
pH, 1st Replicate, Units	6.8
pH, 2nd Replicate, Units	6.8
pH, 3rd Replicate, Units	6.7
pH, 4th Replicate, Units	6.8
Quadruplicate Conductivity:	
Sp. Cond., Average, umhos/cm	2100
Sp. Cond., Std. Deviation, umhos/cm	0
Sp. Cond., 1st Replicate, umhos/cm	2100
Sp. Cond., 2nd Replicate, umhos/cm	2100
Sp. Cond., 3rd Replicate, umhos/cm	2100
Sp. Cond., 4th Replicate, umhos/cm	2100

A-14

LOG NO: P85-08-064

Received: 05 AUG 85
Reported: 03 SEP 85

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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-064-5	W-10-219thru233 Q1014-2	05 AUG 85

PARAMETER	08-064-5
Quadruplicate TOC:	
TOC, Average, mg/L	440
TOC, Standard Deviation, mg/L	6.6
TOC, 1st Replicate, mg/L	430
TOC, 2nd Replicate, mg/L	440
TOC, 3rd Replicate, mg/L	440
TOC, 4th Replicate, mg/L	450
Quadruplicate TOX:	
TOX, 1st Replicate, mg/L	0.53
TOX, 2nd Replicate, mg/L	0.11
TOX, 3rd Replicate, mg/L	0.48
TOX, 4th Replicate, mg/L	<0.05
TOX, Average, mg/L	0.17
TOX, Standard Deviation, mg/L	0.21

A-15

LOG NO: P85-08-064

Received: 05 AUG 85
Reported: 03 SEP 85

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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
08-064-5	W-10-219thru233 Q1014-2	05 AUG 85

PARAMETER	08-064-5
Purgeable Priority Pollutants	
Extraction	08/20/85
Acrolein, ug/L	<500
Acrylonitrile, ug/L	<500
Chlorobenzene, ug/L	50
Ethylbenzene, ug/L	6500
Methylene Chloride, ug/L	100
Trichloroethylene, ug/L	250
Toluene, ug/L	17,000
Other Purgeable Priority Pollutants,	<50
Semi-Quantified Results **	
Xylene Isomers, ug/L	20,000

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

Edward Wilson, Laboratory Director

A-16

APPENDIX B

RECEIVED
JUL 29 1985
JHK & A LA

BROWN AND CALDWELL
ANALYTICAL LABORATORIES

LOG NO: P85-07-211

Received: 12 JUL 85
Reported: 23 JUL 85

Ken Durand
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901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
7-211-1	B5-10 Q-1014-2	12 JUL 85
07-211-2	B5-25 Q-1014-2	12 JUL 85
07-211-3	B6-15 Q-1014-2	12 JUL 85
7-211-4	B6-25 Q-1014-2	12 JUL 85
7-211-5	S-4A-10 Q-1014-2	12 JUL 85
07-211-6	S-4A-25 Q-1014-2	12 JUL 85

ARAMETER	07-211-1	07-211-2	07-211-3	07-211-4	07-211-5	07-211-6
opper, mg/kg	78	160	4100	1400	410	24
hromium, mg/kg	30	49	5100	1500	14	67
ickel, mg/kg	26	12	240	98	31	9.7
Zinc, mg/kg	79	34	430	43	110	150
itric Acid Digestion, Date	07/15/85	07/15/85	07/15/85	07/15/85	07/15/85	07/15/85

B-1

LOG NO: P85-07-211

Received: 12 JUL 85
Reported: 23 JUL 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
7-211-7	S-08-10 Q-1014-2	12 JUL 85
7-211-8	S-08-25 Q-1014-2	12 JUL 85
07-211-9	S-09-15 Q-1014-2	12 JUL 85
7-211-10	S-09-25 Q-1014-2	12 JUL 85
7-211-11	S-10-10 Q-1014-2	12 JUL 85
07-211-12	S-10-25 Q-1014-2	12 JUL 85

ARAMETER	07-211-7	07-211-8	07-211-9	07-211-10	07-211-11	07-211-12
Copper, mg/kg	61	94	28	18	89	25
hromium, mg/kg	41	3.7	15	4.3	31	5.3
ickel, mg/kg	27	<3.1	19	4.6	28	6.4
Zinc, mg/kg	96	54	55	29	100	30
itric Acid Digestion, Date	07/15/85	07/15/85	07/15/85	07/15/85	07/15/85	07/15/85

Edward Wilson, Laboratory Director

B-2

BROWN AND CALDWELL
ANALYTICAL LABORATORIES

LOG NO: P85-10-038

Received: 02 OCT 85
Reported: 11 OCT 85

Ken Durand
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Compton, California 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
10-038-1	B-3-05 Q1014-2	
10-038-2	B-1-10 Q1014-2	
10-038-3	B-1-15 Q1014-2	
10-038-4	B-2-15 Q1014-2	
10-038-5	B-2-20 Q1014-2	
10-038-6	B-4-05 Q1014-2	

PARAMETER	10-038-1	10-038-2	10-038-3	10-038-4	10-038-5	10-038-6
Chromium, mg/kg	420	53	13	54	440	10,000
Copper, mg/kg	1200	470	130	390	230	480
Nitric Acid Digestion, Date	10/08/85	10/08/85	10/08/85	10/08/85	10/08/85	10/08/85
pH, Units	8.1	8.0	7.0	3.9	3.9	4.6

B-3

LOG NO: P85-10-038

Received: 02 OCT 85
Reported: 11 OCT 85

Ken Durand
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901 W. Victoria Street, Suite G
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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
10-038-7	B-5-05 Q1014-2	
10-038-8	B-6-05 Q1014-2	

PARAMETER	10-038-7	10-038-8
Chromium, mg/kg	85	3700
Copper, mg/kg	230	460
Nitric Acid Digestion, Date	10/08/85	10/08/85
pH, Units	8.7	4.5

E-4

LOG NO: P85-10-038

Received: 02 OCT 85
Reported: 11 OCT 85

Ken Durand
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901 W. Victoria Street, Suite G
Compton, California 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
10-038-9	B-3-15 Q1014-2	

PARAMETER	10-038-9
Chromium, mg/kg	11
Nitric Acid Digestion, Date	10/08/85
Carbonate, mg/kg	0.0
Chloride, mg/kg	1100
Sulfate, mg/kg	110
Ammonia Nitrogen (as N), mg/kg	23

B-5

LOG NO: P85-10-038

Received: 02 OCT 85
Reported: 11 OCT 85

Ken Durand
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901 W. Victoria Street, Suite G
Compton, California 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
0-038-10	B-5-15 Q1014-2	

PARAMETER	10-038-10
hromium, mg/kg	3200
Copper, mg/kg	12,000
Nitric Acid Digestion, Date	10/08/85
H, Units	4.8
Carbonate, mg/kg	0.0
Chloride, mg/kg	1600
mmonia Nitrogen (as N), mg/kg	21
Sulfate, mg/kg	170

E-6

LOG NO: P85-10-038

Received: 02 OCT 85
Reported: 11 OCT 85

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901 W. Victoria Street, Suite G
Compton, California 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
0-038-11	B-1-40 Q1014-2	
0-038-12	B-1-50 Q1014-2	
10-038-13	B-2-35 Q1014-2	
0-038-14	B-2-40 Q1014-2	
0-038-15	S-4A-25 Q1014-2	
10-038-16	B-4-25 Q1014-2	

ARAMETER	10-038-11	10-038-12	10-038-13	10-038-14	10-038-15	10-038-16
Carbonate, mg/kg	0.0	0.0	0.0	0.0	0.0	0.0
hloride, mg/kg	5100	2600	5500	2900	2700	1400
mmonia Nitrogen (as N), mg/kg	29	10	42	11	29	25
Sulfate, mg/kg	20	71	41	45	79	450

D-7

LOG NO: P85-10-038

Received: 02 OCT 85
Reported: 11 OCT 85

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Compton, California 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
0-038-17	S-10-25 Q1014-2	
10-038-18	S-09-15 Q1014-2	
10-038-19	S-08-10 Q1014-2	
0-038-20	B-06-15 Q1014-2	

PARAMETER	10-038-17	10-038-18	10-038-19	10-038-20
Carbonate, mg/kg	0.0	0.0	0.0	0.0
Chloride, mg/kg	470	4800	510	1800
Ammonia Nitrogen (as N), mg/kg	6.6	8.4	10	500
Sulfate, mg/kg	67	67	50	2000

Edward Wilson, Laboratory Director

B-8

BROWN AND CALDWELL
ANALYTICAL LABORATORIES

LOG NO: P85-07-415

Received: 09 JUL 85
Reported: 31 JUL 85

Ken Durand
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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-415-1	B1-40 Q-1014-2	08 JUL 85
07-415-2	B1-50 Q-1014-2	08 JUL 85
07-415-3	B2-35 Q-1014-2	08 JUL 85
07-415-4	B2-40 Q-1014-2	08 JUL 85
07-415-5	B3-15 Q-1014-2	08 JUL 85
07-415-6	B4-10 Q-1014-2	08 JUL 85

PARAMETER	07-415-1	07-415-2	07-415-3	07-415-4	07-415-5	07-415-6
H, Units	3.9	5.5	3.3	3.8	6.3	4.0

B-9

LOG NO: P85-07-415

Received: 09 JUL 85
Reported: 31 JUL 85

Ken Durand
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Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-415-7	B4-25 Q-1014-2	08 JUL 85
07-415-8	S-07-35 Q-1014-2	08 JUL 85
07-415-9	S-11-10 Q-1014-2	09 JUL 85
07-415-10	S-11-35 Q-1014-2	09 JUL 85
07-415-11	B5-10 Q-1014-2	12 JUL 85
07-415-12	B5-25 Q-1014-2	12 JUL 85

PARAMETER	07-415-7	07-415-8	07-415-9	07-415-10	07-415-11	07-415-12
pH, Units	4.2	6.9	4.9	8.2	8.3	4.5

B-10

LOG NO: P85-07-415

Received: 09 JUL 85
Reported: 31 JUL 85

Ken Durand
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Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-415-13	B6-15 Q-1014-2	12 JUL 85
07-415-14	B6-25 Q-1014-2	12 JUL 85
07-415-15	S-4A-10 Q-1014-2	12 JUL 85
07-415-16	S-4A-25 Q-1014-2	12 JUL 85
07-415-17	S-08-10 Q-1014-2	12 JUL 85
07-415-18	S-08-25 Q-1014-2	12 JUL 85

PARAMETER	07-415-13	07-415-14	07-415-15	07-415-16	07-415-17	07-415-18
H, Units	3.6	4.2	4.9	6.2	7.3	8.5

B-11

LOG NO: P85-07-415

Received: 09 JUL 85
Reported: 31 JUL 85

Ken Durand
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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-415-19	S-09-15 Q-1014-2	12 JUL 85
07-415-20	S-09-25 Q-1014-2	12 JUL 85
07-415-21	S-10-10 Q-1014-2	12 JUL 85
07-415-22	S-10-25 Q-1014-2	12 JUL 85

PARAMETER	07-415-19	07-415-20	07-415-21	07-415-22
pH, Units	6.9	7.4	8.3	7.3

FOR
Edward Wilson, Laboratory Director

B-12

AUG 01 1985

JHK & A LA

BROWN AND CALDWELL

ANALYTICAL LABORATORIES

LOG NO: P85-07-169

Received: 10 JUL 85
Reported: 30 JUL 85

Ken Durand
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901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
7-169-1	B1-40 Q1014-2	08 JUL 85
07-169-2	B1-50 Q1014-2	08 JUL 85
07-169-3	B2-35 Q1014-2	08 JUL 85
7-169-4	B2-40 Q1014-2	08 JUL 85
07-169-5	B3-15 Q1014-2	08 JUL 85
07-169-6	B4-10 Q1014-2	08 JUL 85

ARAMETER	07-169-1	07-169-2	07-169-3	07-169-4	07-169-5	07-169-6
admium, mg/kg	1.5	8.0	1.2	1.4	<0.67	<0.62
hromium, mg/kg	600	280	2000	150	16	16,000
Copper, mg/kg	400	160	250	550	31	820
Zinc, mg/kg	180	95	120	170	57	92
itric Acid Digestion, Date	07/11/85	07/11/85	07/11/85	07/11/85	07/11/85	07/11/85

B-13

LOG NO: P85-07-169

Received: 10 JUL 85
Reported: 30 JUL 85

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Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
[illegible]-169-7	B4-25 Q1014-2	08 JUL 85
07-169-8	S-07-35 Q1014-2	08 JUL 85
07-169-9	S-11-10 Q1014-2	09 JUL 85
[illegible]-169-10	S-11-35 Q1014-2	09 JUL 85

PARAMETER	07-169-7	07-169-8	07-169-9	07-169-10
[illegible]dmium, mg/kg	<0.61	<0.59	1.2	3.0
Chromium, mg/kg	550	35	16	18
[illegible]pper, mg/kg	1200	46	2400	40
[illegible]nc, mg/kg	52	77	120	68
Nitric Acid Digestion, Date	07/11/85	07/11/85	07/11/85	07/11/85

B-14

LOG NO: P85-07-169

Received: 10 JUL 85
Reported: 30 JUL 85

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J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
7-169-11	B4-15 Q1014-2	08 JUL 85

PARAMETER	07-169-11
Purgeable Priority Pollutants	
Extraction	07/27/85
Acrolein, mg/kg	<3
Acrylonitrile, mg/kg	<3
Other Purgeable Priority Pollutants,	<0.3

B-15

LOG NO: P85-07-169

Received: 10 JUL 85
Reported: 30 JUL 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-169-12	B1-05 Q1014-2	08 JUL 85
07-169-13	B1-10 Q1014-2	08 JUL 85
07-169-14	B1-15 Q1014-2	08 JUL 85
07-169-15	B1-20 Q1014-2	08 JUL 85
07-169-16	B1-30 Q1014-2	08 JUL 85
07-169-17	B2-05 Q1014-2	08 JUL 85

PARAMETER	07-169-12	07-169-13	07-169-14	07-169-15	07-169-16	07-169-17
Sample Held, Not Analyzed	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD

B-16

LOG NO: P85-07-169

Received: 10 JUL 85
Reported: 30 JUL 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
07-169-18	B2-10 Q1014-2	08 JUL 85
07-169-19	B2-15 Q1014-2	08 JUL 85
07-169-20	B2-20 Q1014-2	08 JUL 85
07-169-21	B2-30 Q1014-2	08 JUL 85
07-169-22	B3-05 Q1014-2	08 JUL 85
07-169-23	B3-10 Q1014-2	08 JUL 85

PARAMETER	07-169-18	07-169-19	07-169-20	07-169-21	07-169-22	07-169-23
Sample Held, Not Analyzed	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD

B-17

LOG NO: P85-07-169

Received: 10 JUL 85
Reported: 30 JUL 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
7-169-24	B4-05 Q1014-2	08 JUL 85
7-169-25	B4-20 Q1014-2	08 JUL 85
07-169-26	B4-30 Q1014-2	08 JUL 85
7-169-27	S-07-05 Q1014-2	08 JUL 85
7-169-28	S-07-15 Q1014-2	08 JUL 85
07-169-29	S-07-20 Q1014-2	08 JUL 85

ARAMETER	07-169-24	07-169-25	07-169-26	07-169-27	07-169-28	07-169-29
Sample Held, Not Analyzed	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD

B-18

LOG NO: P85-07-169

Received: 10 JUL 85
Reported: 30 JUL 85

Ken Durand
J.H. Kleinfelder & Assoc.
901 W. Victoria St., Suite G
Compton, CA 90220

Project: Q1014-2

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED
7-169-30	S-07-25 Q1014-2	08 JUL 85
7-169-31	S-07-45 Q1014-2	08 JUL 85
07-169-32	S-11-05 Q1014-2	09 JUL 85
7-169-33	S-11-15 Q1014-2	09 JUL 85
7-169-34	S-11-25 Q1014-2	09 JUL 85
07-169-35	S-11-45 Q1014-2	09 JUL 85

ARAMETER	07-169-30	07-169-31	07-169-32	07-169-33	07-169-34	07-169-35
Sample Held, Not Analyzed	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD

Edward Wilson, Laboratory Director

B-19

Soil sample

Southern California Chemical Labs.

7/9/85
G. Offenbach.
T. King.

		ppm Cr	ppm Cu	ppm Cd	
1.	B3 - 15'	7,000	3,583	nil	pH 7.02 sand
2.	B4 - 05'	23,000	2,666	nil	pH 3.78 silt &
3.	B4 - 10'	17,500	692	nil	pH-3.38 silt
4.	B4 - 15'	11,250	4,333	nil	pH 3.58 silt
5.	B4 - 20'	4,000	1,750	nil	pH 3.68 sand
6.	B4 - 25'	283	1,333	nil	pH 4.07 sand
7	B4 - 30'	5,416	2,416	nil	pH 3.38 silt & sand
8	B1 - 40'	616	266	<.8 ppm	pH 3.61 silt
9	B1 - 50'	192	46	5.8	pH 6.08 clay.
10	B2 - 35'	1,333	142	<.8	pH 3.10 silt
11	B2 - 40'	583	308	<.8	pH 3.26 clay
	B1 - 05'	50	150	4.2	pH 6.57. sand.

B-20

		Cr ppm	Cu ppm	Cd ppm		
13	MW8-05	1,417	192	nil	pH 7.44	silt
14	MW8-10	42	58	nil	pH 6.03	silt & cla
15	MW8-15	192	92	nil	pH 6.51	sand
16	MW8-20	8.3	33	nil	pH 5.58	sand
17	MW8-25	nil	17	nil	pH 6.16	sand
18	MW8-35	25	42	nil.	pH 5.99	clay.
19	B5-05	1,500	1,583	nil	pH 3.72	~~silt~~ sand
20	B5-10	25	58	nil	pH 6.91	silt
21	B5-15	1,083	2,333	nil	pH 6.62	silt
22	B5 20	1,416	1,666	nil	pH 5.25	silt
23	B5-25	283	450	nil	pH 3.70	sand
24	B5-30	233	675	nil	pH 3.98	sand.
25	B6-05	30,000	13,333	nil	pH 6.62	B-21 silt clay

		ppm Cr	ppm Cu	ppm Cd	
26	B6-15	4,333	1,250	mil	pH 4.17 sand.
27	B6-20	1,833	2,166	mil	pH 3.95 sand
28	B6-25	1,166	1,333	mil	pH 4.17 sand
29	B6-30	3,416	1,750	mil	pH 3.58 silt
30					
31					

APPENDIX C

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* Ken Ahmed

Phone:

SHIP TO: Brown & Caldwell

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Ken Ahmed	Charles Holmes	7/10/85 1:42 P
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Charles Holmes		7/10/85 3:42 PM
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)*	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

	Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
22	B3-05	Q1014-2	7-8-85	Hold	
23	B3-10			Hold	
5	B3-15			Same 4 metals	
24	B4-05			Hold	
6	B4-10			Same 4 metals	
11	B4-15			Hold	
25	B4-20			Hold	
7	B4-25			Same 4 metals	
2	B4-30			Hold	
27	S-07-05			Hold	
28	S-07-15			[redacted]	
29	S-07-20			Hold	
30	S-07-25			Hold	
8	S-07-35	↓	↓	Same 4 metals	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(
(

C-1

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Samoler

8507-169

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* Ken [signature]

Phone:

SHIP TO: Brown & Caldwell

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Ken [signature]	[signature] Holmes	7/10/85 1:42 pm
[signature] Holmes	[signature]	7/10/85 3:42 PM
	Receive for laboratory by*: *(Signature)*	

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

	Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
12	B1-05	G1014-2	7-8-85	hold	
13	B1-10			hold	
14	B1-15			hold	
15	B1-20			hold	
16	B1-30			hold	
1	B1-40			Cadmium, Chromium, Zinc, Copper	
2	B1-50			Same 4 metals	
17	B2-05			hold	
18	B2-10			hold	
19	B2-15			hold	
20	B2-20			hold	
21	B2-30			hold	
3	B2-35			Same 4 metals	
4	B2-40	↓	↓	" " "	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4)
(5)

White - J. H. Kleinfelder & Associates   Canary - Laboratory Courtesy Copy   Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature)

Phone: (213) 635-7344

SHIP TO:

Brown - Caldwell

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper BEC

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/12/85 4:00
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Receive for laboratory by*: (Signature)	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
✓B5-05	Q1014-2	7-11-85	hold	
✓35-10 [1]			copper, Chromium, nickel zinc	
✓B5-15			hold	
✓35-20			hold	
✓B5-25 [2]			Copper, chromium Nickel zinc	
✓35-30			hold	
✓36-05			hold	
✓36-15 [3]			same as above	
✓B6-20			hold	
✓36-25 [4]			same as above	
✓B6-30			hold	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4)
(5)

1-3

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

85-07-211

SAMPLERS: (Signature)

Phone: (213) 638-9344

SHIP TO:

Brown & Caldwell

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper BFC

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
		7/12 4:00
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Receive for laboratory by*: (Signature)	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

	Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
	S-4A-05 ✓	Q1014-2	7-10-85	hold	
5	-4A-10 ✓			Copper, chromium, Zinc, Nickel	
	S-4A-15 ✓			hold	
	-4A-20 ✓			hold	
6	-4A-25 ✓			Same as Above	
	S-4A-35 ✓			hold	
	-08-05 ✓			hold	
7	S-08-10 ✓			Same as Above	
	-08-15 ✓			hold	
	S-08-20 ✓			hold	
8	-08-25 ✓			Same as Above	
	S-08-35 ✓			hold	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4)
(5)

C-21

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* Ken Pierce

Phone: (213) 638-9344

SHIP TO: Brown & Caldwell

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper B & C.

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Ken Pierce		7/12/85 4:00 pm
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)*	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
S-09-05	Q 10142	7-10-85	hold	
S-09-15			Copper, chromium, Nickel, Zinc	
S-09-20			hold	
S-09-25 10			same as above	
S-09-35			hold	
S-10-05			hold	
S-10-10 11			same as above	
S-10-15			hold	
S-10-20			hold	
S-10-25 12			same as above	
S-10-45			hold	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

) summary of analytical methodology and QA work (blanks, spikes, duplicates)
) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)*

Phone:

SHIP TO:

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
		7/10/85 1 42
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)*	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
S-07-45	Grid 3	7-8-85	hold	
S-11-05	1		hold	
S-11-10	1	1	store 4 mo.	
S-11-15	1	1	hold	
S-11-25	1	1	hold	
S-11-35	1	1	store 4 mo.	
S-11-45	1	1	hold	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4
(5

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

1-6

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)*

Phone:

SHIP TO:

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
	Charles Holmes	7/10/92 1:42
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)*	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
B1-05	Comp-2	7-9-92	hold	
B1-10			hold	
B1-15	"	"	hold	
B1-20	"	"	hold	
B1-30	"	"	hold	
B1-40	"	"	Cadmium, Chromium, Zinc, Copper	
B1-50	"	"	Store 4 weeks	
B2-05	"	"	hold	
B2-10	"	"	hold	
B2-15	"	"	hold	
B2-20	"	"	hold	
B2-30	"	"	hold	
B2-35	"	"	Store 4 weeks	
B2-40	V	V	" " "	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(summary of analytical methodology and QA work (blanks, spikes, duplicates)
(dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(5) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(
(

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

C-7

CHAIN OF CUSTODY RECORD

SAMPLERS: *(Signature)* [signature]

Phone:

SHIP TO: Brown & Caldwell

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
[signature]	[signature]	7/10/91 1:42 P
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Received by: *(Signature)*	Date/Time
Relinquished by: *(Signature)*	Receive for laboratory by*: *(Signature)*	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
B3-05	C.I.W.M.-2	7-9-91	Hold	
B3-10	"		Hold	
B3-15	"		Save 4 months	
B4-05	"		Hold	
B4-10	"		Save 4 months	
B4-15	"		Hold	
B4-20	"		Hold	
B4-25	"		Save 4 months	
B4-30	"		Hold	
S-07-05	"		Hold	
S-07-15	"		[illegible]	
S-07-20	"		Hold	
S-07-25	"		Hold	
S-07-31	"	"	Save 4 months	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
4)
5)

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature) Mark Ekblad

Phone:

SHIP TO:
Brown & Caldwell
Pasadena

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper

Address

Date Shipped

Shipment Service

Airbill No.

Cooler No.

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Mark Ekblad	Helen Kenedl	7/24/85 4:39
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Receive for laboratory by*: (Signature)	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return original (white) copy to J. H. KLEINFELDER & ASSOCIATES, 901 W. Victoria Street, Suite G, Compton, CA 90220.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
~~W-03-137~~	Q1014-2	7/24/85	EPA method 624	
~~W-03-138~~ DUP			—	
~~W-03-140~~			EPA method 624	
~~W-03-142~~			chromium	
~~W-05-144~~			EPA method 624	
~~W-05-145~~ DUP				
~~W-04-146~~			EPA method 624	
~~W-04-147~~ DUP			—	
~~W-04-148~~			chromium, cadmium, lead	
~~W-03-149~~			EPA method 624	
~~W-03-150~~ DUP			—	
~~W-03-152~~			EPA method 624	
~~W-03-153~~ DUP			—	
~~W-03-154~~			chromium, cadmium	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4) For EPA method 624 also show
(5) list all compounds in method 624 and detection limits

White - J. H. Kleinfelder & Associates Canary - Laboratory Courtesy Copy Pink - Sampler

CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature) Mark Ebell

Phone: 636 9344

SHIP TO:

Brown & Caldwell
373 Fair Oaks
Pasadena Ca 91105

ATTENTION: Joyce

Phone No.

SHIPPING INFORMATION

Shipper JHKLH

Address

Date Shipped 2 AUGUST 85

Shipment Service P & C COURIER

Airbill No. —

Cooler No. #3

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Mark Ebell	[illegible]	8-2-85 5:35
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Receive for laboratory by*: (Signature)	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES, 15303 Ventura Blvd., Suite 700, Sherman Oaks, CA 91403-3156.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
J-20-155	Q-1014-2	8/2/85	TOC	
J-20-156	"	"	"	
J-20-157	"	"	"	
J-20-158	"	"	"	
J-07-159	"	"	TOC	
J-07-160	"	"	TOC and grease	
J-07-161	"	"	TOC	
J-07-162	"	"	TOC	
J-07-163	"	"	TOC	
J-07-164	"	"	TOC and grease	
J-07-165	"	"	TOC	
J-07-166	"	"	TOC	
J-07-167	"	"	TOC and grease	
J-07-168	"	"	TOC and grease	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

(1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
(2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
(3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
(4)
(5)

C-10

White - Sampler | Canary - J. H. Kleinfelder & Associates | Pink - Lab Courtesy Copy

JHK&A Form M-60

CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature) Mark Ebell

Phone: 638 9344

SHIP TO:
Brown & Caldwell
373 FAIROAKS
Pasadena CH 91105

ATTENTION: JOYCE

Phone No.

SHIPPING INFORMATION

Shipper JHK LH

Address

Date Shipped 2 AUGUST 85

Shipment Service B&C COURIER

Airbill No.

Cooler No. #3

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Mark Ebell		2/6 5
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Receive for laboratory by*: (Signature)	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES, 15303 Ventura Blvd., Suite 700, Sherman Oaks, CA 91403-3156.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-07-169	Q-1014-2	8/2/85		
W-07-170	"	"		
W-07-171	"	"		
W-07-172	"	"		
W-07-173	"	"		
W-11-174	"	"		
W-11-175	"	"		
W-11-176	"	"		
W-11-177	"	"		
W-11-178	"	"		
W-11-179	"	"		
W-11-180	"	"		
W-11-181	"	"		
W-11-182	"	"		

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
4)
5)

C-11

White - Sampler | Canary - J. H. Kleinfelder & Associates | Pink - Lab Courtesy Copy

JHK&A Form M-60

CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature) Mark Ehl

Phone: 636 9344

SHIP TO:
Brown & Caldwell
373 FAIROAKS
Pasadena CA 91105

ATTENTION: JOYCE

Phone No.

SHIPPING INFORMATION

Shipper JHK LH

Address

Date Shipped 2 AUGUST 85

Shipment Service B&C COURIER

Airbill No. —

Cooler No. #3

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Mark Ehl		
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Receive for laboratory by*: (Signature)	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES, 15303 Ventura Blvd., Suite 700, Sherman Oaks, CA 91403-3156.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-11-183	Q-1014-2	8/2/85	Cond. Cr+6	
W-11-184			pH cond	
W-11-185			pH cond Cr+6	
W-11-186			Cr+6 pH	
W-11-187			pH cond	
W-11-188			Cr+6 Cl	
W-09-189			TOC	
W-09-190			TOC cond	
W-09-191			TOC	
W-09-192			TOC	
W-09-193			TOX	
W-09-194			TOX cond	
W-09-195			TOX	
W-09 196			TOX	

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
4)
5)

C-12

White - Sampler Canary - J. H. Kleinfelder & Associates Pink - Lab Courtesy Copy

JHK&A Form M-60

CHAIN OF CUSTODY RECORD

SAMPLERS: (Signature) Mark Ehlf

Phone: 638 9344

SHIP TO:
Brown & Caldwell
373 Fair Oaks
Pasadena Ca 91105

ATTENTION:

Phone No.

SHIPPING INFORMATION

Shipper JHK LA

Address

Date Shipped 2

Shipment Service BIC COURIER

Airbill No.

Cooler No. #3

Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Mark Ehlf		8-2-85 5:3
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Receive for laboratory by*: (Signature)	Date/Time

*Analysis laboratory should complete, "sample condition upon receipt", section below, sign and return top copy to J. H. KLEINFELDER & ASSOCIATES, 15303 Ventura Blvd., Suite 700, Sherman Oaks, CA 91403-3156.

Sample Number	Site Identification	Date Sampled	Analysis Requested	Sample Condition Upon Receipt
W-09-197	Q-014-2	8/2/85		
W-09-198	"	"		
W-09-199	"	"		
W-09-200	"	"		
W-09-201	"	"		
W-09-202	"	"		
W-09-203	"	"		

LAB INSTRUCTIONS: Laboratory reports should reference and be billed by site ID# and contain the following:

1) summary of analytical methodology and QA work (blanks, spikes, duplicates)
2) dates for (a) sampling, (b) lab receipt, (c) extraction, (d) injection/analysis
3) detection limits for all constituents analyzed for and reporting of all constituents detected which were not specifically designated
4)
5)

C-13

White - Sampler | Canary - J. H. Kleinfelder & Associates | Pink - Lab Courtesy Copy

JHK&A Form M-60

APPENDIX D

See reverse side for instructions.
Please type or print clearly. Press Hard.

State Department of Health Services
HAZARDOUS MATERIALS MANAGEMENT SECTION
744 P Street, Sacramento, CA 95814

1 Manifest Number 189 000452

GENERATOR (GENERATOR MUST COMPLETE)

2 Name SOUTHERN CALIF CHEM
EPA # CA 0 1 0 0 8 4 8 4 0 2 5
Address 8851 DICE RD Phone 698-8036
City, State, Zip S.F.S. CA. 90670

3 Designated TSD Facility (Authorized to operate under an approved state program or federal program.)
Name BKK
EPA # CA 0 0 6 7 7 8 6 7 4 9
Address 2210 AZUSA RD Phone 965-0916
City, State, Zip WEST COVINA CA

4 Alternate TSD Facility
Name
EPA #
Address Phone
City, State, Zip

5 U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS	NUMBER OF CONTAINERS
WASTE N/A			5,000	GALS	TYPE: ☐ DRUMS ☐ BAGS ☐ CARTONS ☒ TANK TRUCK ☐ DUMP TRUCK ☐ OTHER
WASTE					

6 Waste Category MUD & WATER 7 Ext. Haz. Waste Permit No. N/A 8 Generating Process METAL RECLAIMING

LIST COMPONENTS:	CONCENTRATION RANGE UPPER	LOWER	UNITS	LIST COMPONENTS:	CONCENTRATION RANGE UPPER	LOWER	UNITS
9 A. IRON	25	15	☒% ☐ppm.	E.			☐% ☐ppm.
B. COPPER	5	2	☒% ☐ppm.	F.			☐% ☐ppm.
C. CHROME	3	1	☒% ☐ppm.	G.			☐% ☐ppm.
D. OTHER METALS	1	1	☒% ☐ppm.	Non-Hazardous Material		%	

10 WASTE PROPERTIES: pH 7.0 ☐Toxic ☐Flammable ☐Corrosive/Irritant ☐Reactive ☐Sensitizer ☐Carcinogen/Mutagen
11 PHYSICAL STATE: ☐Solid ☐Liquid ☒Sludge ☐Slurry ☐Gas ☐Other
12 SPECIAL HANDLING INSTRUCTIONS: ☒Gloves ☐Goggles ☐Respirator ☐Other WASH SPILLS WITH WATER

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

13 [signature] Signature of Authorized Agent and Title 12-5-81 Date Shipped

TRANSPORTER (HAULER MUST COMPLETE)

#2255

14 TRANSPORTER NAME NASH SALVAGE INC.
ADDRESS 16211 Placid Drive PHONE (213) 941-5117
CITY, STATE, ZIP Whittier, CA 90604

15 PICK-UP DATE 12-8-81
EPA NO. C A D 9 9 0 8 0 2 9 9 3 Time 1230 ☐AM ☒PM
16 Jim Flanthom Signature of Authorized Agent and Title 12-8-81 Date

TSD FACILITY (FACILITY-OPERATOR MUST COMPLETE)

17 NAME BKK
EPA NO. CAL000771867499
PHONE NO. 9650911

18 QUANTITY (If Measured) 20.97
19 STATE FEE (If Any) 20.97

20 INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT:

RECEIVED
DEC 28 1981

21 HANDLING OR DISPOSAL METHOD:
☐Surface Impoundment ☒Landfill
☐Injection Well ☐Land Treatment
☐Treatment (Specify)
☐Recovery or Re-use ☐Storage/Transfer
☐Recycle

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

22 Designated TSD Facility Name SO. CALIF. CHEM. CO. EPA NO.
23 [signature] Signature of Authorized Agent and Title 12-8-81 Date Accepted

Copy WHITE to Fac keeps / Copy HS) ... Copy 2—YELLOW: To Transporter from TSDF Copy 3—PINK: To Generator from TSDF Copy 4—GOLDENROD: Generator Keeps (Send Copy to D... S)

-See reverse side for instructions.
Please type or print clearly. Press Hard.

State Department of Health Services
HAZARDOUS MATERIALS MANAGEMENT SECTION
744 P Street, Sacramento, CA 95814

1 Manifest Number 189 000883

GENERATOR (GENERATOR MUST COMPLETE)

2 Name: Southern California Chemical Co
EPA # C A D 0 0 8 4 8 8 0 2 5
Address: 8851 Dice Rd. Phone: 698-8036
City, State, Zip: Santa Fe Springs, Ca. 90670

3 Designated TSD Facility (Authorized to operate under an approved state program or federal program.)
Name: BKK Dump
EPA # C A D 0 6 7 7 8 6 7 4 9
Address: 2210 Azusa Rd. Phone:
City, State, Zip: Covina, Ca.

4 Alternate TSD Facility
Name:
EPA #
Address: Phone:
City, State, Zip:

5	U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS	NUMBER OF CONTAINERS
	WASTE Mud & Water (37)	N/A		5000	gal.	TYPE: ☐ DRUMS ☐ BAGS ☐ CARTONS ☒ TANK TRUCK ☐ DUMP TRUCK ☐ OTHER
	WASTE					

6 Waste Category: Mud & Water (37) 7 Ext. Haz. Waste Permit No.: N/A 8 Generating Process: Metal Reclaiming

9	LIST COMPONENTS:	CONCENTRATION RANGE UPPER	LOWER	UNITS	LIST COMPONENTS:	CONCENTRATION RANGE UPPER	LOWER	UNITS
A.	Iron	25	15	☒ % ☐ ppm.	E. Water	75	60	☒ % ☐ ppm.
B.	Copper	5	2	☒ % ☐ ppm.	F.			☐ % ☐ ppm.
C.	Chrome	1	.1	☒ % ☐ ppm.	G.			☐ % ☐ ppm.
D.	Other Metals	1	.1	☒ % ☐ ppm.	Non-Hazardous Material %			

10 WASTE PROPERTIES: pH 8.0-9.0 ☐ Toxic ☐ Flammable ☒ Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen
11 PHYSICAL STATE: ☐ Solid ☐ Liquid ☒ Sludge ☒ Slurry ☐ Gas ☐ Other
12 SPECIAL HANDLING INSTRUCTIONS: ☒ Gloves ☒ Goggles ☐ Respirator ☐ Other

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

13 Signature of Authorized Agent and Title: G. G. Otterbach, Plant Mgr. Date Shipped: 10-13-82

TRANSPORTER (HAULER MUST COMPLETE)

15 PICK-UP DATE 10-13-82

14 TRANSPORTER NAME: NASH SALVAGE INC.
ADDRESS: 16211 Placid Drive PHONE: (213) 941-5117
CITY, STATE, ZIP: Whittier, CA 90604
EPA NO. C A D 9 9 0 8 0 2 9 9 3 Time 1? ☐ AM ☐ PM

16 Signature of Authorized Agent and Title: Robert Mundi Driver Date: 10-13-82

TSD FACILITY (FACILITY-OPERATOR MUST COMPLETE)

17 NAME: BKK
EPA NO. C A D 0 6 7 7 8 6 7 4 9
PHONE NO.

18 QUANTITY (If Measured) 23.71
19 STATE FEE (If Any) 94.84

21 HANDLING OR DISPOSAL METHOD:
☐ Surface Impoundment ☒ Landfill
☐ Injection Well ☐ Land Treatment
☐ Treatment (Specify)
☐ Recovery or Re-use ☐ Storage/Transfer
☐ Recycle

20 INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT:

RECEIVED
OCT 29 1982
SO. CALIF. CHEM. CO.

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

22 Designated TSD Facility Name: SCA (80) EPA NO.

23 Signature of Authorized Agent and Title: Date Accepted: 10/13/82

Copy 1-WH... TSD F... Keep... d Co... OHS... ppy 2 YELLOW: To Transporter from TSDF Copy 3-PINK: To Generator from TSDF Copy 4-GOLDENROD: Generator Keeps (Send Copy to DOHS

SEE REVERSE SIDES FOR INSTRUCTIONS. PLEASE TYPE OR PRINT CLEARLY.

PRESS HARD 70270

CALIFORNIA HAZARDOUS WASTE MANIFEST

STATE DEPARTMENT OF HEALTH SERVICES
HAZARDOUS MATERIALS MANAGEMENT SECTION
744 P STREET, SACRAMENTO, CA 95814

① MANIFEST NUMBER 471 - 001040

GENERATOR (GENERATOR MUST COMPLETE)

② NAME Southern California Chemical Co.
EPA NO. CAD003435025
ADDRESS 3851 Dice Rd.
CITY, STATE, ZIP CODE Santa Fe Springs, Ca. 90670
PHONE NO. (213) 698-8036
ORDER PLACED BY _____ ORDER DATE _____
P.O./CONTRACT NO. _____

③ DESIGNATED TSD FACILITY (AUTHORIZED TO OPERATE UNDER AN APPROVED STATE OR FEDERAL PROGRAM)

NAME B K K Dump
EPA NO. CAD067788742
ADDRESS 2210 Azusa Rd.
CITY, STATE, ZIP CODE Covina, Ca.
PHONE NO. _____

④ ALTERNATE TSD FACILITY

NAME _____
EPA NO. _____
ADDRESS _____
CITY, STATE, ZIP CODE _____
PHONE NO. _____

⑤ U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN NA I.D. NO	WEIGHT OR VOLUME	UNITS	CONTAINERS NUMBER
WASTE	N/A		4500	gal.	DRUMS ___ BAGS ___ CARTONS ___ DUMP TRUCK ___ TANK TRUCK ___ X OTHER
WASTE					

⑥ WASTE CATEGORY Inorganic Solids (37) ⑦ EX. HAZ. WASTE PERMIT NO. N/A ⑧ GENERATING PROCESS Metals Reclaiming

⑨ LIST COMPONENTS:

		CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS		UNITS
A	Iron	25	15	X %	___ PPM	
B	Copper	5	2	X %	___ PPM	
C	Chrome	1	.1	___ %	___ PPM	
D	Other Metals	1	.1	X %	___ PPM	
E	Water	75	60	X %	___ PPM	
F				___ %	___ PPM	
G				___ %	___ PPM	

NONHAZARDOUS MATERIAL _____ %

⑩ WASTE PROPERTIES: PH 8.0-9 X TOXIC ___ FLAMMABLE X CORROSIVE/IRRITANT ___ REACTIVE ___ SENSITIZER ___ CARCINOGEN/MUTAGEN

⑪ PHYSICAL STATE ___ SOLID ___ LIQUID X SLUDGE ___ SLURRY ___ GAS ___ OTHER _____

⑫ SPECIAL HANDLING INSTRUCTIONS: X GLOVES X GOGGLES ___ RESPIRATOR ___ OTHER _____

GENERATOR CERTIFICATION: THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED, DESCRIBED, PACKAGED, MARKED & LABELED, AND ARE IN PROPER CONDITION FOR TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF TRANSPORTATION AND THE EPA.

IN THE EVENT OF A SPILL CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802.

⑬ G. G. Otterbach, Plant Mgr. [signature] 11/18/82
SIGNATURE OF AUTHORIZED AGENT & TITLE — DATE SHIPPED

TRANSPORTER (HAULER MUST COMPLETE)

⑭ NAME CALIF. CHEMICAL DISPOSAL
EPA NO. CAD980735311
ADDRESS 12159 LONGWORTH
CITY, STATE ZIP CODE NORWALK, CA 90650
PHONE NO. (213) 868-1675

RECEIVED
DEC 13 1982
SO CALIF CHEM CO

JOB NO. 540
UNIT NO. 2-27

⑮ PICK-UP DATE 11-18-82
TIME 3:15 ___ AM X PM

⑯ [signature] Robert Collins
SIGNATURE OF AUTHORIZED AGENT & TITLE

TSD FACILITY (OPERATOR MUST COMPLETE)

⑰ NAME BKK
EPA NO. CAD067788742

⑱ QUANTITY (IF MEASURED) (36) (20.36)
⑲ STATE FEE (IF ANY) $ 21.44

⑳ INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT _____

㉑ IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY
NAME _____
NO. _____

㉒ HANDLING OR DISPOSAL METHOD
___ SURFACE IMPOUNDMENT X LANDFILL
___ INJECTION WELL ___ LAND TREATMENT
___ TREATMENT (SPECIFY) _____
___ RECOVERY OR REUSE ___ STORAGE/TRANSFER

[signature]
SIGNATURE OF AUTHORIZED AGENT & TITLE

11/18/82
DATE ACCEPTED

REVISED 11/80

Please type or print clearly. Press Hard.

HAZARDOUS MATERIALS MANAGEMENT SECTION
744 P Street, Sacramento, CA 95814

Number 109 000987

70270

9:07

GENERATOR (GENERATOR MUST COMPLETE)

2 Name: Southern California Chemical
EPA #: C A D 0 0 8 4 8 8 0 2 5
Address: 8851 Dice Rd. Phone: 698-8036
City, State, Zip: Santa Fe Springs, Ca. 90670

3 Designated TSD Facility (Authorized to operate under an approved state program or federal program.)
Name: BKK Dump
EPA #: C A D 0 6 7 7 8 6 7 4 9
Address: 2210 Azusa Rd. Phone:
City, State, Zip: Covina, Ca.

4 Alternate TSD Facility
Name:
EPA #:
Address: Phone:
City, State, Zip:

5 U.S. DOT PROPER SHIPPING NAME	U.S. DOT HAZARD CLASS	UN/NA ID NO.	WEIGHT OR VOLUME	UNITS	NUMBER OF CONTAINERS
WASTE	N/A	None	4500	gal.	TYPE: ☐ DRUMS ☐ BAGS ☐ CARTONS ☒ TANK TRUCK ☐ DUMP TRUCK ☐ OTHER
WASTE					

6 Waste Category: Mud & Water (37) 7 Ext. Haz. Waste Permit No.: N/A 8 Generating Process: Metal Reclaiming

9 LIST COMPONENTS:	CONCENTRATION RANGE UPPER	LOWER	UNITS	LIST COMPONENTS:	CONCENTRATION RANGE UPPER	LOWER	UNITS
A. Iron	25	15	☒% ☐ppm.	E. Water	75	60	☒% ☐ppm.
B. Copper	5	2	☒% ☐ppm.	F.			☐% ☐ppm.
C. Chrome	3	.1	☒% ☐ppm.	G.			☐% ☐ppm.
D. Other Metals	1	.1	☒% ☐ppm.	Non-Hazardous Material	100	%	

10 WASTE PROPERTIES: pH 5.0-9.0 ☐ Toxic ☐ Flammable ☒ XXXXX Corrosive/Irritant ☐ Reactive ☐ Sensitizer ☐ Carcinogen/Mutagen

11 PHYSICAL STATE: ☐ Solid ☐ Liquid ☒ Sludge ☐ Slurry ☐ Gas ☐ Other

12 SPECIAL HANDLING INSTRUCTIONS: ☒ Gloves ☒ Goggles ☐ Respirator ☐ Other

RECEIVED
MAR 14 1983
SO. CALIF. CHEM. CO.

GENERATOR CERTIFICATION: This is to certify that the above named materials are properly classified, described, packaged, marked, labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and EPA.

IN THE EVENT OF A SPILL, CONTACT THE NATIONAL RESPONSE CENTER, U.S. COAST GUARD 1-800-424-8802

13 G. G. Otterbach, Plant Mgr. G. G. Otterbach 2/8/83
Signature of Authorized Agent and Title — Date Shipped

TRANSPORTER (HAULER MUST COMPLETE)

15 PICK-UP DATE: 2-8-83 1285Y

14 TRANSPORTER NAME: NASH SALVAGE INC.
EPA NO.: C A D 9 9 0 8 0 2 9 9 3 Time: 1/0 ☐ AM ☒ PM
ADDRESS: 16211 Placid Drive PHONE: (213) 941-5117
CITY, STATE, ZIP: Whittier, CA 90604

16 ROGER NASH DRIVER 2-8-83
Signature of Authorized Agent and Title — Date

TSD FACILITY (FACILITY-OPERATOR MUST COMPLETE)

17 NAME: BKK 18 QUANTITY (If Measured): 27.02
EPA NO.: C A D 0 6 7 7 1 7 1 19 STATE FEE (If Any): $108.08
PHONE NO.:

20 INDICATE ANY SIGNIFICANT DISCREPANCIES BETWEEN MANIFEST AND SHIPMENT:
NAHL IS TITLE 22 ARE CONSIDERED HAZARDOUS

21 HANDLING OR DISPOSAL METHOD:
☐ Surface Impoundment ☒ Landfill
☐ Injection Well ☐ Land Treatment
☐ Treatment (Specify)
☐ Recovery or Re-use ☐ Storage/Transfer
☐ Recycle

IF WASTE IS HELD FOR DELIVERY ELSEWHERE, SPECIFY THE DESIGNATED TSD FACILITY:

22 Designated TSD Facility Name: EPA NO.:

23 Signature of Authorized Agent and Title — Date Accepted: 2/8/83

60

Copy 1—WHITE: TSD Facility Keeps (Send Copy to DOHS) Copy 2—YELLOW: To Transporter from TSDF Copy 3—PINK: To Generator from TSDF Copy 4—GOLDENROD: Generator Keeps (Send Copy to DOHS)

State of California—Health and Welfare Agency

Department of Health Services

HAZARDOUS MATERIALS MANAGEMENT SECTION
744 P Street
Sacramento, CA 95814

UNIFORM HAZARDOUS WASTE MANIFEST

(Please print or type with ELITE type (12 characters per inch).

STATE ID NUMBER 8252297

TO BE FILLED IN BY THE GENERATOR

GENERATOR NAME AND MAILING ADDRESS
Southern California Chemical Co., Inc.
8851 Dice Road., Santa Fe Springs, Ca. 90670
AREA CODE/PHONE NUMBER (213) 698-8036

MANIFEST DOCUMENT NUMBER
EPA ID NUMBER
CAD008488025 02885

TRANSPORTER NO. 1
Nash Salvage Inc., 16211 Placid Drive
Whittier, Ca. 90604
VEH./CONTAINER NO. 00003847
EPA ID NUMBER CAD990802993

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY
EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
BKK LDF
2210 Azusa Rd., West Covina, Ca.
AREA CODE/PHONE NUMBER (213) 965-0916
EPA ID NUMBER CAD067786749

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.
Unspecified Sludge Waste	N/A NF	4700	G	001	TC	491

COMPONENTS	CONC. UPPER	RANGE LOWER	UNITS %	UNITS ppm
Iron	25	15	X	
Copper	5	2	X	
Chrome	3	.1	X	
Other Metals	1	.1	X	
Water	75	60	X	

SPECIAL HANDLING INSTRUCTIONS
Gloves, Goggles

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the EPA.

G. G. Otterbach, Plant Manager
PRINTED OR TYPED FULL NAME AND SIGNATURE
MO. 04 DAY 12 YR. 83

☐ CHECK IF CONTINUATION SHEET IS USED. NUMBER OF CONTINUATION SHEETS

TO BE FILLED IN BY TRANSPORTER

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE MATERIALS
DATE REC'D & ACCEPTED
Nash Salvage Driver
PRINTED OR TYPED FULL NAME AND SIGNATURE
MO. 04 DAY 12 YR. 83

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE MATERIALS
DATE REC'D & ACCEPTED
PRINTED OR TYPED FULL NAME AND SIGNATURE
MO. DAY YR.

TO BE FILLED IN BY TSDF

DISCREPANCY INDICATION SPACE
1765
60 7060

Facility owner or operator: Certification of receipt of hazardous material covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.
DATE REC'D & ACCEPTED
PRINTED OR TYPED FULL NAME AND SIGNATURE
EPA ID NUMBER
MO. DAY YR.

Original—White—Disposer send to DHS; Green—Hauler; Yellow—Disposer; Pink—Generator

DHS 8022 (7/82)

D-5

State of California—Health and Welfare Agency
HAZARDOUS WASTE MANAGEMENT BRANCH
74__ P Street
Sacramento, CA 95814

Department of Health Services

UNIFORM HAZARDOUS WASTE MANIFEST

70270

STATE ID NUMBER 83040102

Please print or type with ELITE type (12 characters per inch).

GENERATOR NAME AND MAILING ADDRESS

Southern California Chemical Co., Inc.
8851 Dice Road, Santa Fe Springs, Ca. 90670
(213) 698-8036

AREA CODE/PHONE NUMBER

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER

TRANSPORTER NO. 1

Nash Salvage, Inc., 16211 Placid Drive
Whittier, Ca. 90604

VEH./CONTAINER NO. 3749

EPA ID NUMBER CAD99999299

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

VEH./CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY

BKK LDF
2210 Azusa Rd., West Covina, Ca.
(213) 965-0916

AREA CODE/PHONE NUMBER

EPA ID NUMBER CAD0677867

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT NO.
Unspecified Sludge Waste (Non-Halogenated)	NONE	4500	G	001	TC	491

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS P
Iron	25	15	X	
Copper	5	2	X	
Chrome	3	.1	X	
Other Metals	1	.1	X	
Water	75	60	X	

SPECIAL HANDLING INSTRUCTIONS

Gloves, Goggles

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

G. G. Otterbach, Plant Manager

Printed or typed full name and signature

MO. 07 DAY 28 YR 8

☐ Check if continuation sheet is used. Number of continuation sheets

TO BE FILLED IN BY GENERATOR

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Nash Salvage Driver

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR

TO BE FILLED IN BY TRANSPORTER

DISCREPANCY INDICATION SPACE

D-6

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

EPA ID NUMBER

DATE RECEIVED & ACCEPT MO. DAY YR

Printed or typed full name and signature

TO BE FILLED IN BY TSDF

TSDF RETAINS

e of California—Health and Welfare Agency
ZAR OUS WASTE MANAGEMENT BRANCH
P S et
amento, CA 95814

UNIFORM HAZARDOUS WASTE MANIFEST

Department of Health Services

se print or type with ELITE type (12 characters per inch).

STATE ID NUMBER 8 3040193

GENERATOR NAME AND MAILING ADDRESS
Southern California Chemical Co., Inc.
8851 Dice Road, Santa Fe Springs, Ca. 90670
(213) 698-8036
AREA CODE/PHONE NUMBER 7027D

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER
C A D 0 9 8 4 8 0 2 5 0 0 0 3

TRANSPORTER NO. 1
Nash Salvage, Inc., 16211 Placid Drive
Whittier, Ca. 90604

VEH./CONTAINER NO. 07-40065

EPA ID NUMBER
C A D 0 9 8 0 2 0 0 0

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

VEH./CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY
BKK LDF
2210 Azusa Rd., West Covina, Ca.
(213) 965-0916
AREA CODE/PHONE NUMBER

EPA ID NUMBER
C A D 0 9 6 7 7 8 6 7 4 0

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT NO.	DISP. METH.
Unspecified Sludge Waste (Non-Halogenated)	NONE	4500	G	001	TC	491	D83

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
Iron	25	15	X	
Copper	5	2	X	
Zinc	1	.2	X	
Water	75	60	X	

RECEIVED
NOV 8 1983
SO. CALIF. CHEM. CO.

SPECIAL HANDLING INSTRUCTIONS
Gloves, Goggles

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

G. G. Otterbach, Plant Manager
Printed or typed full name and signature

MO. 10 DAY 06 YR. 83

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES
Nash Salvage Driver Dennis Kissen
Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. 10 DAY 06 YR. 83

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR.

DISCREPANCY INDICATION SPACE

D-7

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

Printed or typed full name and signature

EPA ID NUMBER

DATE RECEIVED & ACCEPTED MO. 11 DAY 06 YR. 83

TSDF SENDS THIS COPY TO GENERATOR WITHIN 15 DAYS

State of California—Health and Welfare Agency
HAZARDOUS WASTE MANAGEMENT BRANCH
71 744 P Street
Sacramento, CA 95814

Department of Health Services

UNIFORM HAZARDOUS WASTE MANIFEST

Please print or type with ELITE type (12 characters per inch).

STATE ID NUMBER 83587061

MANIFEST DOCUMENT NUMBER

GENERATOR NAME AND MAILING ADDRESS

Southern California Chemical Co.
8851 Dice Road
Santa Fe Springs, CA 90670

AREA CODE/PHONE NUMBER (213) 698-8035

EPA ID NUMBER CAD000486[illegible]

TRANSPORTER NO. 1

189 Nash Salvage Inc.
16211 Placid Drive
Whittier, CA 90604
(213) 941-5117

VEH./CONTAINER NO.

EPA ID NUMBER CAD9[illegible]99

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

Return to Generator

VEH./CONTAINER NO.

EPA ID NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY

Environmental Protection Corporation
Westside Disposal
Highway 33 Fellows, CA. (805)327-9681

AREA CODE/PHONE NUMBER

EPA ID NUMBER CAT08001022[illegible]

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO.	DI ME
R.O. Hazardous Waste, Liquid, N.O.S. ORM-E	NA9189	4000	G	001	CT	132	0

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
Iron	25	15	X	
Copper	15	2	X	
Zinc	1	0.2	X	
Chrome, Trivalent	2	0.5	X	
Salt	5	2	X	
Ammonium Sulfate	5	2	X	
Caustic Soda	5	2	X	
Water	55	45	X	

SPECIAL HANDLING INSTRUCTIONS

Gloves & Goggles Liquid pH = 4

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

G. G. Otterbach, Plant Manager [signature]

Printed or typed full name and signature

MO. 03 DAY 02 YR. 84

☐ Check if continuation sheet is used. Number of continuation sheets

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Robert McDonald [signature] 3691

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR

DISCREPANCY INDICATION SPACE

D-8

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

EPA ID NUMBER

DATE RECEIVED & ACCEPTED MO. DAY YR

Printed or typed full name and signature

TO BE FILLED IN BY GENERATOR — TO BE FILLED IN BY TRANSPORTER — TO BE FILLED IN BY TSDF

FORM NO. DHS-8022A 11/82

GENERATOR RETAINS

83-87067

...NTROL DIVISION

95814

Department of Health

UNIFORM HAZARDOUS WASTE MANIFEST

FORM NO. DHS-8022A 3-84

WO 152

STATE ID NUMBER 83611314

print or type with ELITE type (12 characters per inch).

GENERATOR NAME AND MAILING ADDRESS

Southern California Chemical Co.
8851 Dice Road
Santa Fe Springs, CA 90670

MANIFEST DOCUMENT NUMBER

EPA ID NUMBER

AREA CODE/PHONE NUMBER (213) 698-8036

CAD008481025

TRANSPORTER NO. 1 NAME AND MAILING ADDRESS

189 Nash Salvage Inc.
16211 Placid Drive
Whittier, CA 90604
(213) 941-5117

VEH./CONTAINER NO. 1512115

EPA ID NUMBER CAD009080293

TRANSPORTER NO. 2/ALTERNATE TSD FACILITY

Return To Generator

VEH./CONTAINER NO.

EPA ID NUMBER

AREA CODE/PHONE NUMBER

TREATMENT, STORAGE, OR DISPOSAL (TSD) FACILITY

Environmental Protection Corporation
Westside Disposal
Highway 33 Fellow, CA

EPA ID NUMBER CAT080010283

AREA CODE/PHONE NUMBER (805) 327-9681

PROPER U.S. D.O.T. SHIPPING NAME AND HAZARD CLASS	UN/NA NUMBER	TOTAL QUANTITY	UNIT WT/VOL	CONTAINER NO.	CONTAINER TYPE	WASTE CAT. NO	DISP. METH
Hazardous Wsate, Liquid, N.O.S. ORM-E	NA9189	4000	G	001	CT	13203	

COMPONENTS	CONC. RANGE UPPER	CONC. RANGE LOWER	UNITS %	UNITS PPM
Iron	25	15	X	
Copper	15	2	X	
Zinc	1	0.2	X	
Chrome, Trivalent	2	0.5	X	
Salt	5	2	X	
Ammonium Sulfate	5	2	X	
Caustic Soda	5	2	X	
Water	55	45	X	

SPECIAL HANDLING INSTRUCTIONS

Gloves & Goggles Liquid pH

This is to certify that the above-named wastes are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable requirements of the Department of Transportation and the EPA.

Printed or typed full name and signature G. G. Otterbach - Plant Manager

MO. 11 DAY 20 YR 84

☐ Check if continuation sheet is used. Number of continuation sheets

BY TRANSPORTER

TRANSPORTER 1 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature Robert McDonald Robert McDonald 3871

DATE REC'D & ACCEPTED MO. 11 DAY 20 YR 84

TRANSPORTER 2 ACKNOWLEDGEMENT OF RECEIPT OF ABOVE WASTES

Printed or typed full name and signature

DATE REC'D & ACCEPTED MO. DAY YR

IN BY TSDF

DISCREPANCY INDICATION SPACE

D-1

Facility owner or operator: Certification of receipt of hazardous waste covered by this manifest except as noted in the discrepancy indication space above. Note: TSDF must complete waste number. See instructions.

Printed or typed full name and signature

EPA ID NUMBER

DATE RECEIVED & ACCEPTED MO. DAY YR

GENERATOR RETAINS

State of California—Health and Welfare Agency

WO152

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: CAD008488025 | Manifest Document No.: 1 | 2. Page 1 of | Information in the shaded areas is not required by Federal law.

GENERATOR

3. Generator's Name and Mailing Address
Southern California Chemical Co. Inc.
8851 Dice Road, Santa Fe Springs, CA 90670

4. Generator's Phone (213) 698-8036

5. Transporter 1 Company Name: Nash Salvage Inc 157

6. US EPA ID Number: CAD988902993

7. Transporter 2 Company Name:

8. US EPA ID Number:

9. Designated Facility Name and Site Address
Environmental Protection Corporation
Westside Disposal, Hwy. 33, Fellows, CA
(805) 327-9681

10. US EPA ID Number: CAT080010283

A. State Manifest Document Number: 84152816 WO 152

B. State Generator's ID: CAD008488025

C. State Transporter's ID: 53319

D. Transporter's Phone: (213)941-5117

E. State Transporter's ID:

F. Transporter's Phone:

G. State Facility's ID: CAT 080010283

H. Facility's Phone: 805-768-4806

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Hazardous Waste, Liquid, N.O.S. ORM-E NA9189	001	CT	4500	G	132
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Chrome +3 Approx. 3%
Copper " 5%
Nickel " .05%
Iron " 10%
Liquid ph= above 2

K. Handling Codes for Wastes Listed Above: 04

15. Special Handling Instructions and Additional Information
Gloves & Goggles

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name: G. G. Otterbach | Signature: [signature] | Date: Month 1 Day 1 Year 85

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Robert McDaniel | Signature: [signature] | Date: Month 1 Day 30 Year 85

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name: | Signature: | Date: Month Day Year

RECEIVED
JAN 30 1985
SO. CALIF. CHEM. CO.

FACILITY

19. Discrepancy Indication Space
D-10

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: JOHANNA HEVEY | Signature: [signature] | Date: Month 1 Day 14 Year 85

Yellow: GENERATOR RETAINS

HS 8022 A (7/84)
PA 8700-22)

84 89541

PH @ 4.0 INF1 EPA# 59053 IL

State of California—Health and Welfare Agency

WO152

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008488025 Manifest Document No.
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Southern California Chemical Co., Inc.
8851 Dice Road, Santa Fe Springs, CA 90670
4. Generator's Phone (213) 698-8036

A. State Manifest Document Number 84536001 WO 152
B. State Generator's ID CAD008488025

5. Transporter 1 Company Name: 189 Nash Salvage Inc.
6. US EPA ID Number: CAD998902993
C. State Transporter's ID 53319
D. Transporter's Phone 941-5117

7. Transporter 2 Company Name
8. US EPA ID Number
E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Environmental Protection Corporation
Westside Disposal, Hwy. 33, Fellows, CA
(805) 327-9681
10. US EPA ID Number: CAT080010283
G. State Facility's ID CAT080010283
H. Facility's Phone 805-764-4506

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Hazardous Waste, Liquid, N.O.S. ORM-E NA9189	001	CT	4500	G	132
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Chrome +3 Approx 3% Liquid ph= above
Copper " 5%
Nickel " .05%
Iron " 10%

K. Handling Codes for Wastes Listed Above: 04

15. Special Handling Instructions and Additional Information
Gloves & Goggles

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name: G. G. Otterbach
Signature: [signature]
Date Month Day Year: 01 08 85

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: FRED E. OSBORN
Signature: [signature] 1172
Date Month Day Year: 01 08 85

18. Transporter 2 Acknowledgement or Receipt of Materials
Printed/Typed Name
Signature
Date Month Day Year

RECEIVED
JAN 30 1985
SO. CALIF. CHEM. CO.

19. Discrepancy Indication Space
D-11

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Printed/Typed Name: ROLAND GATEWOOD
Signature: [signature]
Date Month Day Year: 1 09 85

4500 Gal
H

DHS 8022 A (7/84)
(EPA 8700-22)

PH 9.0 Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS
56-700

84 89641

WO/152 H

Department of Health Services
Toxic Substances Control Division
Sacramento, California

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.	CAD008488025
Manifest Document No.	
2. Page 1 of	
Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address	Southern CAlifornia Chemical Co., Inc. 8851 Dice Road, Santa Fe XXXXXXX Springs, CA. 90670
4. Generator's Phone	(213) 698-8036
A. State Manifest Document Number	84153102
B. State Generator's ID	CAD008488025
5. Transporter 1 Company Name	Nash Salvage Inc.
6. US EPA ID Number	CAD990802993
C. State Transporter's ID	53313
D. Transporter's Phone	213/941-5117
7. Transporter 2 Company Name	
8. US EPA ID Number	
E. State Transporter's ID	
F. Transporter's Phone	
9. Designated Facility Name and Site Address	Environmental Protection Corporation Westside Disposal, Hwy 33, Fellows, CA (805) 327-9681
10. US EPA ID Number	CAD080010283
G. State Facility's ID	CAT080010283
H. Facility's Phone	

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. RQ Hazardous Waste, Liquid, N.O.S. NA9189 Dot E7476	001	TT	4500	G	132
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above

Chrome +3 Approx 3% Liquid pH= XXX above 2
Copper " 3%
Nickel " ~~.05%~~ .01%
Iron " 2%

K. Handling Codes for Wastes Listed Above: 04

15. Special Handling Instructions and Additional Information

Gloves and Goggles WO 152

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name	Signature	Date Month Day Year
G. Otterbach	[signature]	04 12 85

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year
Fred E. Orla	[signature] 4210	04 12 85

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name	Signature	Date Month Day Year

RECEIVED
MAY 13 1985
SO. CALIF. CHEM. CO.

19. Discrepancy Indication Space

D-12

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date Month Day Year
Susan E Patzer	[signature]	04 12 85

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

DHS 8022 A (7/84) EPA 8700-22) pH 4-7 ~~WW~~ WW2 EPC# 62127 84 89541

State of California—Health and Welfare Agency

Department of Health Services
Toxic Substances Control Division
Sacramento, California

WD 152

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. C A D 0 0 8 4 8 8 0 2 5 | Manifest Document No.

2. Page 1 of | Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Southern California Chemical Co., Inc.
8851 Dice Road, Santa Fe Springs, CA 90670

4. Generator's Phone (213) 698-8036

A. State Manifest Document Number 84152948

B. State Generator's ID

5. Transporter 1 Company Name: Nash Salvage Inc.

6. US EPA ID Number: C A D 9 9 0 8 0 2 9 9 3

C. State Transporter's ID 5221 3

D. Transporter's Phone 213/941-5117

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Environmental Protection Corporation
Westside Disposal, Hwy 33, Fellows, CA
(805) 327-9681

10. US EPA ID Number: C A D 0 8 0 0 1 0 2 8 3

G. State Facility's ID CAT000160283

H. Facility's Phone

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
a. Hazardous Waste, Liquid, N.O.S. NA9189 DOT 7476 / ORM-E	0 0 1	TT	4500	G	132
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Chrome +3 Approx. 3% Liquid pH=above 2
Copper " 3%
Nickel " .01%
Iron " 2%

K. Handling Codes for Wastes Listed Above
04

Casmalia Resources
NTU Road, Casmalia, CA 93429

RECEIVED
JUN 13 1985
SO. CALIF. CHEM. CO.

15. Special Handling Instructions and Additional Information
Gloves and Goggles WO 152

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

Printed/Typed Name	Signature	Date (Month Day Year)
G. Otterbach	[signature]	0 5 2 8 8 5

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)
Robert McDonald	Robert McDonald 6003	0 5 2 8 8 5

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name	Signature	Date (Month Day Year)

FACILITY

19. Discrepancy Indication Space
17-13

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name	Signature	Date (Month Day Year)
Susan E Patsek	[signature]	05 28 85

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

DHS 8022 A (7/84)
(EPA 8700-22)

pH 4.1 WEH

EPC# 63412

84 80541

State of California—Health and Welfare Agency

EPC 0100W

Department of Health Ser
Toxic Substances Control Div
Sacramento, Calif

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No. CAD008488025 — Manifest Document No. 6362

2. Page 1 of — Information in the shaded area is not required by Federal law.

3. Generator's Name and Mailing Address
Southern California Chemical Co., Inc.
8851 Dice Rd. Santa Fe Springs, CA 90670

4. Generator's Phone (213) 698-8036

A. State Manifest Document Number: 84152949

B. State Generator's ID: CAD 008488025

5. Transporter 1 Company Name: Nash Salvage, Inc.

6. US EPA ID Number: CAD990808029

C. State Transporter's ID:

D. Transporter's Phone: 213/941-511

7. Transporter 2 Company Name

8. US EPA ID Number

E. State Transporter's ID

F. Transporter's Phone

9. Designated Facility Name and Site Address
Environmental Protection Corp.
Westside Disposal, Highway 33, Fellows, CA
Approval No. 0100W

10. US EPA ID Number: CAT080010283

G. State Facility's ID: CAT 080010283

H. Facility's Phone: 805/327-9681

11. US DOT Description (Including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No
a. Hazardous Waste, Liquid, N.O.S. ORM-E NA9189 DOT # 8822	001	DT	3900	G	132
b.					
c.					
d.					

J. Additional Descriptions for Materials Listed Above
Chrome +3 Approx 3%
Copper " 3%
Nickel " 0.5%
Iron " 3%
Liquid pH= Above 4

K. Handling Codes for Wastes Listed Above: 04

15. Special Handling Instructions and Additional Information
Gloves and Goggles

Alternate TSD: Casmalia Resources
NTU Road, Casmalia, CA 934
805/937-8449
CAD020748125
WAN 0165

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national governmental regulations.

GENERATOR

Printed/Typed Name: Southern California Chemical Co by: G. Otterbach — Signature — Date: Month Day

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name: Robert D McDonald — Signature — Date: Month Day

18. Transporter 2 Acknowledgement or Receipt of Materials

Printed/Typed Name — Signature — Date: Month Day

RECEIVED
SEP 18 1985
SO. CALIF. CHEM. CO.

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name: ROLAND. CATEWOOD — Signature — Date: Month Day

Yellow: TSDF SENDS THIS COPY TO GENERATOR WITHIN 30 DAYS

DHS 8022 A (7/84)
(EPA 8700-22)

H.9.1 JW 20.2 - Field WW3 EPA # 95816

APPENDIX E

LAB REQUEST

Date Submitted: 2-5-85 Lab No. 0411

From: G. Oberbach. Representing:

Sample Source: Sludge from the pond #1 at SFS plant (SCC-CP).

Sample Description:

Analysis Required:

Sample Identification (Lab No.)	Analysis	
	Sample "as is"	Dried sample
Cu	2.9%	12.3%
Fe	2.06%	8.77%
Zn	0.9%	3.67%
Cr	0.54%	2.24%
Ni	0.026%	0.12%
Pb	0.029%	0.15%
Cd	nil	0.03%
Na	2.91%	12.65%
Residue	1.35%	4.7%

Moisture = 76.5%

Date Completed: 2-6-85 By: Sonya Shaarsma

SCC-79
9/14/76

LAB REQUEST

Date Submitted: 10-09-84 Lab No. _____

From: C - Ottenbach Representing: _____

Sample Source: _____

Sample Description: Sludge from Pond

Analysis Required: Cu, Ni, Fe, Cr, Zn.

Sample Identification (Lab No.)	Analysis (10-09-84)	(10-10-84) Very Wet
	Cu = 7.2%	Cu = 3.6%
	Fe = 18.7%	Fe = 9.0%
	Zn = 1.64%	Zn = 0.81%
	Cr = 0.87%	Cr = 0.46%
	Ni = nil	Ni = nil

Date Completed: 10-09-84 By: Sonja

SOC-79
9/14/76

Southern California Chemical Co., Inc.

LAB REQUEST

Date submitted 2-19-85 Lab No. 0539

From G. Ottenbach.

Sample source Sludge sample from Pond #1 after Cr-treatment.

Sample description

Analysis required

Sample Identification (Lab No.) Analysis

Cu = 3.7%
Fe = 1.6%
Total Cr = 3.8%
Zn = 0.31%
Ni = 0.016%
Pb = 0.008%
Cd = nil
Na = 3.1%
Moisture = 69.23%

Date completed 2-20-85 By Sonya Ghantous

SCC-79
Rev 10/14/77

E-3